4.4 SCENIC RESOURCES

This section describes laws, ordinances, regulations and policies applicable to scenic resources, and existing conditions regarding scenic quality. Potential short-term and long-term scenic impacts that could result from project construction and operation are discussed and mitigation measures are recommended as necessary to reduce potentially significant adverse effects.

4.4.1 REGULATORY SETTING

A variety of laws, regulations, plans, and policies related to scenic quality and scenic resource management are administered by federal and state agencies, the Tahoe Regional Planning Agency (TRPA), and local agencies. Those that apply to the proposed project are discussed below.

The proposed project is located within and near overlapping jurisdictions that have policies pertaining to scenic resources. More than half of the project components are located on National Forest System (NFS) lands in the Lake Tahoe Basin Management Unit (LTBMU) and the Tahoe National Forest and much of the project area is within the jurisdiction of TRPA. The project is located in Placer and Nevada counties. Various communities and local planning jurisdictions also have policies that address visual quality in the project area.

FEDERAL

The National Forest Management Act requires the development of long-range land and resource management plans for NFS. The LTBMU Land and Resource Management Plan (LRMP) was approved in 1988 as required by the act (USFS 1988). It has been amended several times, including the Sierra Nevada Forest Plan Amendment (2004). The LRMP provides guidance for all natural resource management activities within LTBMU managed lands. The Tahoe National Forest has a LRMP that specifically addresses management of Tahoe National Forest lands outside the LTMBU (USFS 2005). The National Forest Management Act requires all projects and activities to be consistent with the LRMP.

The applicable LRMPs direct forest management activities to consider scenic resources identified through the Visual Management System (VMS), which provides an overall framework for the inventory, analysis, and management of the visual environment (USFS 1974). Under the VMS, the US Forest Service (USFS) has established management goals referred to as Visual Quality Objectives (VQOs) to describe the level of visible modification resulting from proposed land use activities that are considered acceptable in a given area. The six VQOs, in order of scenic quality and levels of afforded protection, include *Preservation* (i.e., the highest degree of scenic quality), *Protection* (i.e., unaltered scenic quality), *Retention* (i.e., appearing unaltered), *Partial Retention* (i.e., appearing slightly altered), *Modification* (i.e., moderately altered), and *Maximum Modification* (i.e., heavily altered) (USFS 2001).

The VQO levels applicable to lands within the project area are:

- **Retention (R) –** The Retention (R) VQO provides for management activities that are not visually evident. Under Retention, activities may only repeat form, line, color, and texture that are frequently found in the characteristic landscape. Changes in qualities of size, amount, intensity, direction, and pattern should not be evident.
- **Partial Retention (PR)** – Under the Partial Retention (PR) VQO, management activities are to remain visually subordinate to the characteristic landscape. Activities may repeat form, line, color, and texture common to the characteristic landscape but changes in qualities of size, amount, intensity, direction, and pattern remain visually subordinate to the characteristic landscape. Activities may also introduce form, line, color, and

texture that are found infrequently or not at all in the characteristic landscape, but they should remain visually subordinate to the visual strength of the characteristic landscape.

- **Modification (M)** – Under the modification (M) VQO, management activities may visually dominate the original characteristic landscape. However, activities of vegetative and land form alterations must borrow from naturally established form, line, color, and texture so completely and at such a scale that its visual characteristics are those of natural occurrences within the surrounding area or character type (USFS 1974).

A map of the project area with VQO designations shown for NFS land managed by the USFS is presented in Exhibit 4.4-1. As shown, the primary VQO for NFS land affected by the project is Partial Retention. The project also crosses some NFS land with a VQO designation of Retention, as well as a limited area designated as Modification. Portions of the project are on lands within the jurisdictional boundaries of TRPA, which oversees land development in the Lake Tahoe Region; these portions of the project were evaluated using TRPA visual resources management criteria and guidelines, where applicable (discussed below).

STATE

California's Scenic Highway Program was created by the Legislature in 1963 to preserve and protect scenic highway corridors from change that would diminish the aesthetic value of lands adjacent to highways. The State Scenic Highway System includes highways that are either eligible for designation as scenic highways or have been designated as such. There are no officially designated State Scenic Highways within the project viewshed. However, State Route (SR) 28 and SR 89 in Placer County and Interstate 80 (I-80) in both Placer and Nevada counties are eligible for designation as state scenic highways. Portions of the 650 Line and the 625 Line cross or are visible from these roadways.

TAHOE REGIONAL PLANNING AGENCY

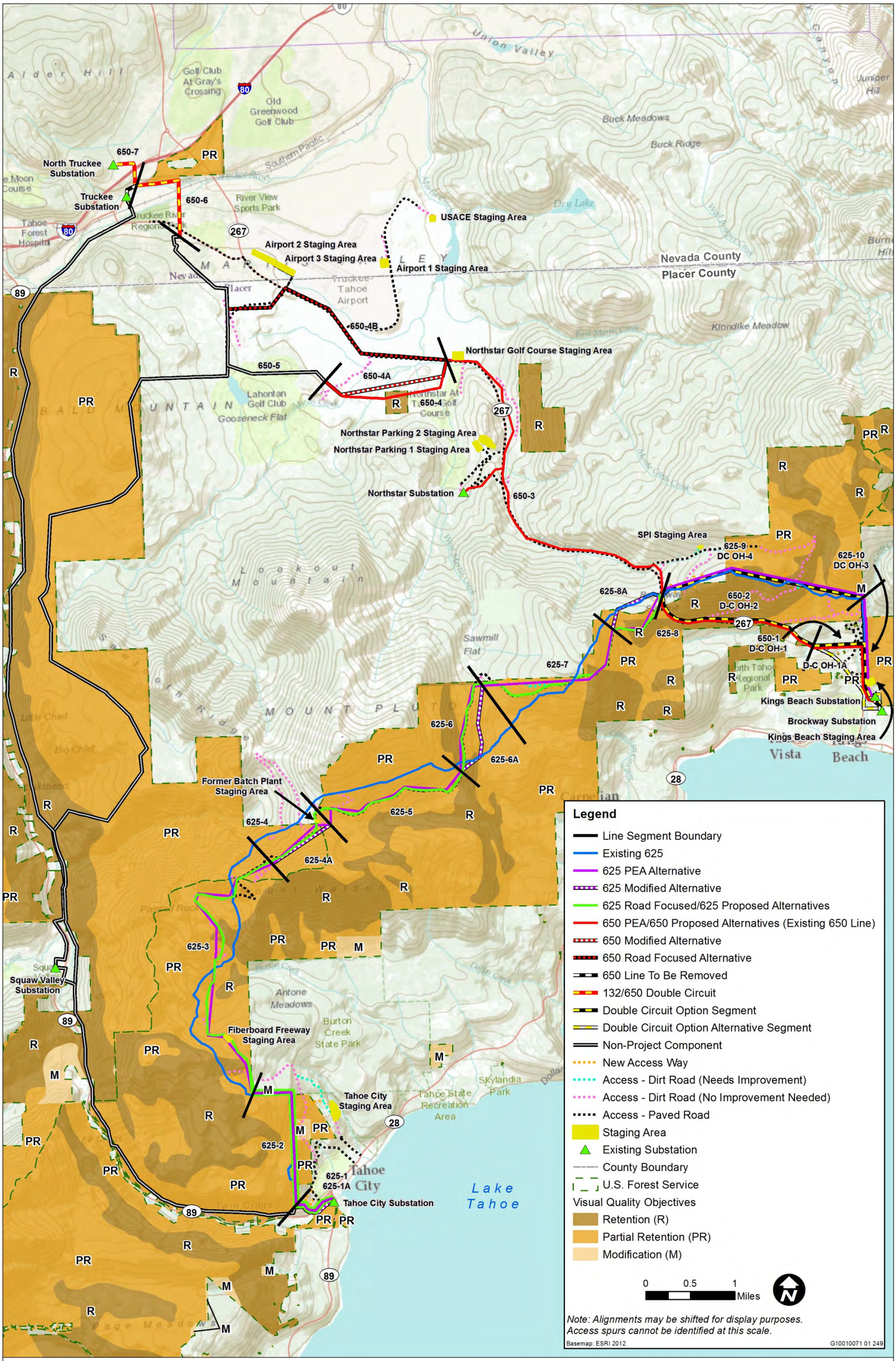
REGIONAL PLAN

TRPA implements its authority to regulate growth and development in the Lake Tahoe Region through the Regional Plan. The Regional Plan includes Resolution 82-11, the Environmental Threshold Carrying Capacities (threshold standards), Goals and Policies, Code of Ordinances, and other guidance documents.

ENVIRONMENTAL THRESHOLD CARRYING CAPACITIES

TRPA adopted environmental threshold carrying capacities in August 1982 for the purpose of maintaining and improving the various resources of the Lake Tahoe Region. Scenic quality is an exceptional attribute of the Region, and specific threshold carrying capacities were developed to protect and improve the scenic resources of the area. TRPA threshold standards require maintenance of threshold rating values for roadway and shoreline travel routes, individually mapped scenic resources, recreation area scenic resources, and compatibility with the natural environment. According to Policy ME-1.1 of the Regional Plan, TRPA shall prepare evaluation reports every four years to evaluate the status and trend of threshold standard attainment (TRPA 2012a). The TRPA thresholds were most recently evaluated in 2011.

Following is a description of the TRPA threshold indicators for scenic resources that are relevant to the project alternatives. The methods for inventory and evaluation of travel routes and scenic resources are parallel with those employed by the USFS, and are standard practice within the LTBMU.



Legend

- Line Segment Boundary
- Existing 625
- 625 PEA Alternative
- 625 Modified Alternative
- 625 Road Focused/625 Proposed Alternatives
- 650 PEA/650 Proposed Alternatives (Existing 650 Line)
- 650 Modified Alternative
- 650 Road Focused Alternative
- 650 Line To Be Removed
- 132/650 Double Circuit
- Double Circuit Option Segment
- Double Circuit Option Alternative Segment
- Non-Project Component
- New Access Way
- Access - Dirt Road (Needs Improvement)
- Access - Dirt Road (No Improvement Needed)
- Access - Paved Road
- Staging Area
- Existing Substation
- County Boundary
- U.S. Forest Service

Visual Quality Objectives

- Retention (R)
- Partial Retention (PR)
- Modification (M)

0 0.5 1 Miles

Note: Alignments may be shifted for display purposes. Access spurs cannot be identified at this scale.

Basemap: ESRI 2012 G10010071 01 249

Source: Adapted by Ascent Environmental in 2012

Exhibit 4.4-1 Visual Quality Objectives within NFS Lands

ASCENT ENVIRONMENTAL

Travel Route Ratings

The TRPA travel route rating threshold tracks long-term, cumulative changes to views of the landscape from state and federal highways in urban, transitional, and natural landscapes in the region. The threshold also tracks changes to views from the surface of Lake Tahoe looking toward the shore. Major roadways within the Lake Tahoe Region have been divided into 53 segments called "Roadway Travel Units" based on their landscape characteristics. Lake Tahoe's shoreline is similarly divided into an additional 33 segments called "Shoreline Travel Units." The project would neither directly affect nor be visible from any of the Shoreline Travel Units because of screening by trees and man-made structures; therefore, Shoreline Travel Units are not discussed further.

The following six criteria are rated to determine the travel route rating threshold score for each Roadway Travel Unit:

1. Human-made features along roadways and shoreline;
2. Physical distractions to driving along roadways;
3. Roadway characteristics;
4. Views of the lake from roadways;
5. General landscape views from roadways and shoreline; and,
6. Variety of scenery from roadways and shoreline.

The travel route rating is a unit-less, numerical rating (composite score) consisting of the sum of the ratings of the six different aspects of the landscape within each travel unit. To secure threshold attainment, travel route ratings must meet or exceed the threshold standard. To do this, the composite score of those roadway travel routes with a 1982 score of 15.5 or greater must be maintained at 1982 levels, and the composite score of all roadway travel routes with a 1982 score of 15 or lower, must improve until the minimum score of 15.5 is reached. Elements of the proposed project would be visible from the following Roadway Travel Units (Exhibit 4.4-2): Unit 14 – Tahoe Tavern, Unit 15 – Tahoe City, Unit 41 – Brockway Summit, and Unit 42 – Outlet to Lower Truckee River. As of 2011, Units 14, 15, and 41 currently meet or exceed the scenic threshold standard and Unit 42 does not (TRPA 2012c).

Scenic Quality Ratings

The purpose of this TRPA scenic quality threshold is to maintain or enhance views of individual, existing scenic resources. The scenic resources in the Region include certain views of the natural landscape and distinctive natural features that were identified, mapped, described, and evaluated as part of the 1982 Scenic Resource Evaluation (TRPA 1982). Scenic resources include:

- foreground, middle-ground, and background views of the natural landscape from roadways;
- certain views to Lake Tahoe from roadways;
- certain views of Lake Tahoe and the natural landscape from roadway entry points into the region;
- unique landscape features, such as streams, beaches, and rock formations that add interest and variety, as seen from roadways;
- certain views of the shoreline, the water's edge, and the foreground as seen from the lake;
- certain views of the backdrop landscape, including the skyline, as seen from the lake; and
- visual features on or near the shore that are of particular visual interest as seen from the lake (TRPA 1982).

Numerical scenic quality ratings are derived for each mapped scenic resource using four visual indicators as subcomponents: unity, vividness, variety, and intactness. As defined by TRPA, unity is the degree to which the visual resources of a scene join together to form a single, coherent, harmonious unit. Vividness is a measure of contrasting elements, such as color, line, and shape, marked differences seen as related, or repetition of similarities. It is sometimes referred to as distinctiveness. Variety is numerous or different parts seen together

and can be referred to as richness. Intactness describes the degree to which a landscape retains its natural condition, or the degree to which modifications emphasize or enhance the natural condition of the landscape (TRPA 2007).

Each of these four indicators is rated on a scale from zero (absent) to three (high). The ratings for all four indicators are summed to yield the scenic quality rating (composite score) for a particular resource. To secure threshold attainment, the current rating of each scenic resource must meet or exceed the threshold standard, which is equal to the rating reported in the 1982 Lake Tahoe Basin Scenic Resource Inventory. As of 2011, the scenic resources that could be affected by the proposed project, as listed below, were in attainment of the threshold standard for scenic quality (TRPA 2012c).

- Within Roadway Travel Unit 14 – Tahoe Tavern: Scenic Resource 14-1, views of the natural landscape from the road (SR 89) and Scenic Resource 14-2, a visual feature that includes a meadow area across from the Tahoe Tavern.
- Within Roadway Travel Unit 15 – Tahoe City: Scenic Resource 15-6, visual features that include views down the Truckee River and surrounding areas from Fanny Bridge.
- Within Roadway Travel Unit 41 – Brockway Summit: Scenic Resource 41-1, entry point views looking south from SR 267 that include the highway corridor with Lake Tahoe seen in the distance.
- Within Roadway Travel Unit 42 – Outlet to the Truckee River: Scenic Resource 42-6, views of natural landscape from SR 89 that include the river (TRPA 1982).

The locations of these scenic resources are shown in Exhibit 4.4-2.

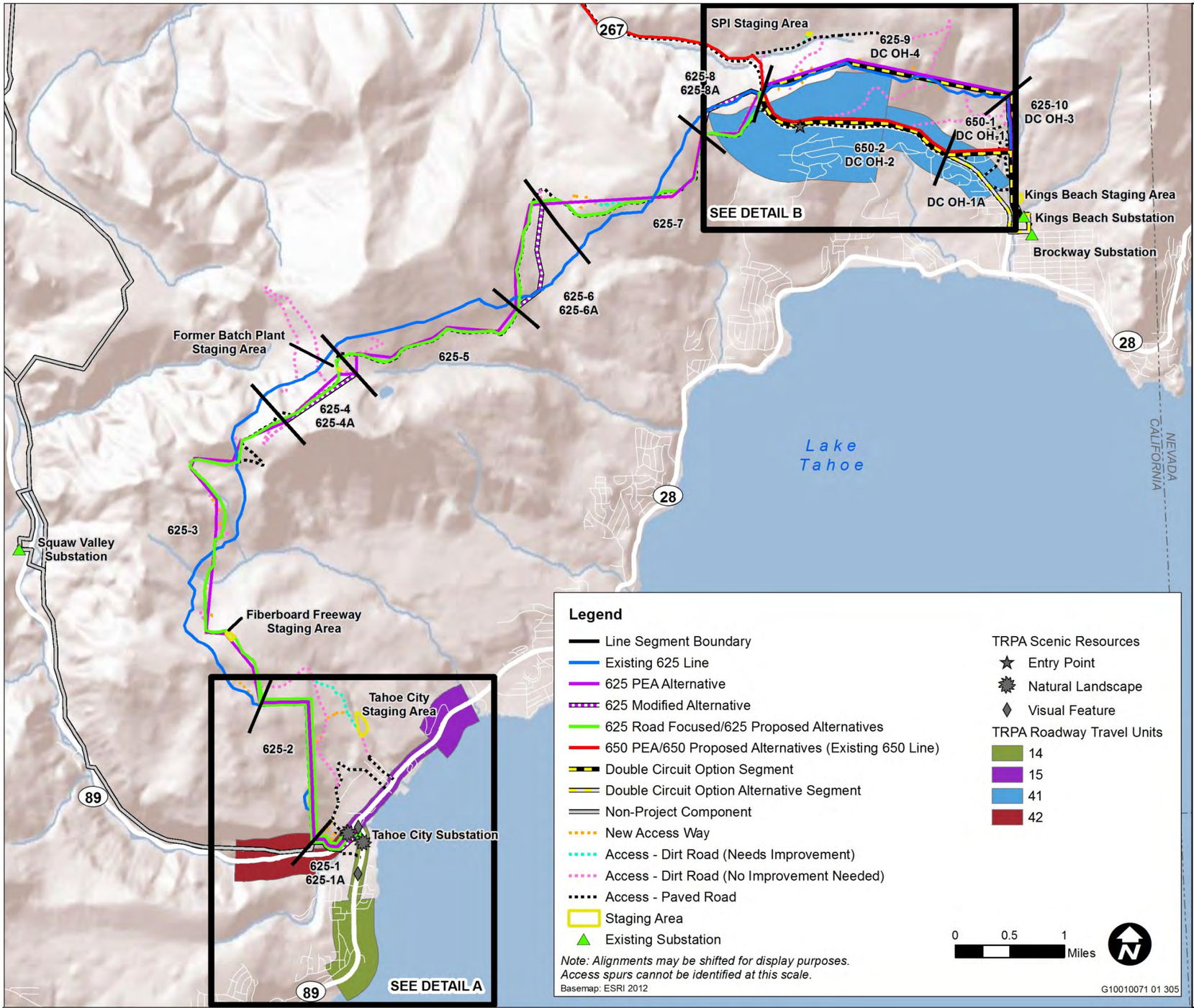
Public Recreation Areas and Bike Trails Ratings

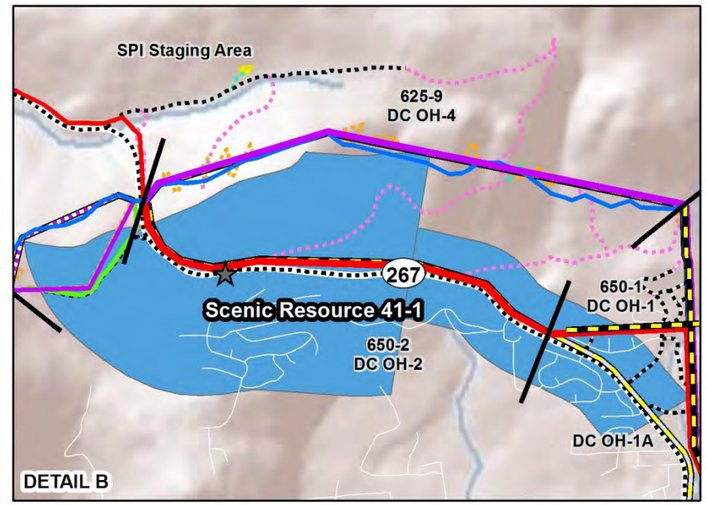
The TRPA public recreation area scenic quality threshold applies to 37 specific public recreation areas, including certain beaches, campgrounds, ski areas, and 11 segments of Class I and Class II bicycle trails listed in the Lake Tahoe Scenic Resource Evaluation, II. Recreation Areas (TRPA 1993). Public recreation areas with views of scenic resources are valuable because they are major public gathering places, hold high scenic values, and are places where people are static (compared to people on the travel routes) and, therefore, have more time to focus their attention on the views and scenic resources. Scenic resources visible from public recreation areas include:

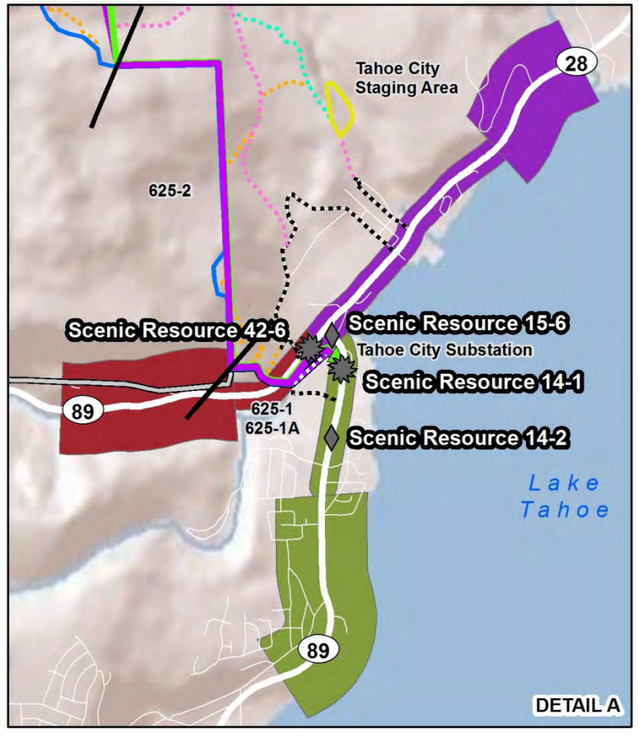
- views of the lake and the surrounding natural landscape from within the recreation area,
- views of distinctive natural features that are within the recreation area, and
- views of human-made features in or adjacent to the recreation area that influence the viewing experience.

Scenic quality threshold ratings for scenic resources associated with public recreation areas and bike trails are derived in the same manner described above for scenic resources within Roadway Travel Units, using the same visual indicators of unity, vividness, variety, and intactness.

TRPA's inventory of public recreation areas and bike trails was developed in 1993. Since then, new public recreation areas and bike trails have been developed but are not yet included in the inventory. The 64-Acre Recreation Site in Tahoe City that now serves as a recreation area and the Truckee River Bike Trail that passes through the 64-Acre Recreation Site and alongside the Truckee River are among these facilities. Elements of the proposed project would be visible from these facilities and the analysis of scenic impacts considers these views.







Source: Adapted by Ascent Environmental in 2012

Exhibit 4.4-2

TRPA Roadway Travel Units and Scenic Resources

ASCENT ENVIRONMENTAL

COMMUNITY DESIGN

The TRPA community design threshold is a policy statement that applies to the built environment and is intended to ensure that design elements of buildings are compatible with the natural, scenic, and recreational values of the Region. The community design threshold is implemented through the community plan process, wherein design standards and guidelines are developed to meet the needs and desires of individual communities, and through the site planning process, wherein the design principles of the TRPA Code are implemented as part of individual development projects, and are reviewed and approved by TRPA and local governments. None of the project alternatives would result in construction of buildings.

GOALS AND POLICIES

The Regional Plan includes two elements relevant to scenic resources, the Conservation Element, Scenic Sub-element and the Land Use Element, Community Design Sub-element (TRPA 2012a). Scenic Goal SR-1 is to "maintain and restore the scenic qualities of the natural appearing landscape." In support of this goal, Policy SR-1.1 states that, "all proposed development shall examine impacts to the identified landscape views from roadways, bike paths, public recreation areas, and Lake Tahoe."

CODE OF ORDINANCES

The following chapters of the TRPA Code of Ordinances contain aesthetic standards that are relevant to the project (TRPA 2012b).

Design Standards

Chapter 36, "Design Standards," of the TRPA Code contains design standards, including standards for site design, building design, landscaping, and lighting. The TRPA Design Review Guidelines provide a summary of the Code requirements and guidelines or suggestions for attainment of the standards (TRPA 1989a).

Scenic Standards

Chapter 36 of the TRPA Code also contains design standards pertaining to scenic quality. These standards establish a process for analyzing projects for scenic quality and outlines when visual simulations and other documents are required. They also require a security deposit equal to the cost of scenic mitigation measures for projects visible from nonattainment areas, and a five-year review for continued presence and maintenance.

Chapter 66 of the TRPA Code contains scenic quality standards, provides scenic highway corridor design standards, and establishes scenic quality review processes. Specifically, Subsections 66.1.4 and 66.1.5 of the TRPA Code describes scenic quality standards for projects in view from roadway and shoreline travel units, and public recreation areas and bicycle trails. Subsection 66.2 specifies that major roadways and all federal and state highways within the Lake Tahoe Region are designated as scenic highways. Scenic highway corridor design standards in Subsection 66.2 apply to projects visible from 300 feet, 1,000 feet, and 0.5 mile from urban corridors, transition corridors, and natural corridors, respectively. The proposed project is within the scenic highway corridors of SR 89, SR 28, and SR 267. These corridors are coincident with the boundaries of the Roadway Travel Units shown in Exhibit 4.4-2.

Height

Chapter 37 of the TRPA Code contains standards pertaining to height. Specifically, Subsection 37.6 establishes height standards for structures other than buildings. Subsection 37.6.1 states that no structure, other than a building, shall have a height greater than 26 feet. Subsection 37.6.2 states that this maximum height may be increased for certain structures, including utility poles, up to the minimum necessary to feasibly implement the project if certain findings are made. The required findings include that the function of the structure requires a

greater maximum height than otherwise allowed, and the additional height is the minimum necessary to implement the project and there are no feasible alternatives that would require less additional height.

TRPA Scenic Quality Improvement Program/Environmental Improvement Program

The TRPA Scenic Quality Improvement Program (SQIP) (TRPA 1989b) was adopted to provide a program for implementing physical improvements to the built environment in the Tahoe Region. It is intended to contribute to the attainment of scenic thresholds and serves as an implementation guide. The program is an overall action plan to specifically improve the scenic quality of roadway and shoreline travel routes that do not meet the scenic thresholds.

The Environmental Improvement Program (EIP) adopted in 1998 incorporates elements of the SQIP. The EIP includes a list of specific projects throughout the Tahoe Basin that are deemed necessary to help attain and maintain scenic thresholds (TRPA 1998).

LOCAL AGENCIES

Placer County Design Standards and Guidelines for the Lake Tahoe Region Including Community Plan Areas

The Placer County Design Standards and Guidelines include guidelines for minimizing the visual impact of utility lines within scenic highway corridors (Placer County 1994). These corridors include SRs 28, 89, and 267. The standards relevant to utilities, such as required undergrounding, are applicable only to electrical lines that operate at 32 kilovolts or less. Otherwise, the standards primarily address signage, parking, site and building design, architecture, and landscaping for residential, commercial, light industrial, public service and recreational development.

Placer County General Plan

The Placer County General Plan (Placer County 1994b) contains a number of policies related to scenic resources. Scenic Routes are specified in Community Plans, including the Martis Valley Community Plan and Tahoe City Community Plan (each discussed below).

Town of Truckee 2025 General Plan

The Town of Truckee 2025 General Plan (2006) contains provisions regarding scenic resources and utility undergrounding in its Community Character Element. I-80 is listed as a scenic corridor. Scenic views include views to Mount Rose, Castle Peak, Donner Summit, Mount Judah, Tinker's Knob, Donner Lake, and views up and down the Truckee River. Brockway Road from the Truckee River to SR 267 is considered a key corridor with a gateway to Truckee at SR 267. The Community Character and Land Use Elements of the Town of Truckee 2025 General Plan (2006) contain policies regarding aesthetic resources.

Martis Valley Community Plan

Martis Valley is an approximately 70-square-mile area that lies within Placer and Nevada counties, as well as within the Town of Truckee incorporated limits. This area is generally located to the east of Truckee and north of Northstar. The northern portion of the 650 Line passes through this area. A number of policies contained within the Martis Valley Community Plan (2003) are relevant to visual resources. In particular, Section IV, Community Design, provides directions for preserving high visual quality of the area. Section VI, Public Facilities and Services also contains provisions for undergrounding utilities.

Tahoe City Community Plan

The Tahoe City Community Plan (1994) contains goals and objectives for urban design and development, traffic and parking, public service facilities, commercial development, and recreation. The objectives of the plan are implemented through enforceable policies. The plan also describes a vision for the future of Tahoe City and

identifies various projects in the immediate Tahoe City area that are intended to improve scenic quality. It identifies opportunities for scenic improvements along SR 89 at the entrance to Tahoe City through relocating or screening existing non-compatible uses including public service facilities.

4.4.2 EXISTING CONDITIONS/AFFECTED ENVIRONMENT

This section describes the existing visual environment as it relates to the proposed project, including a description of the scenic resources study area, an associated visibility analysis, identification of potentially affected viewer groups, and a description of scenic quality and visual exposure conditions generally, and for representative viewpoints.

CONCEPTS RELATED TO SCENIC RESOURCES

Scenic or visual resources are generally defined as both the natural and built features of the landscape that contribute to the experience and appreciation of the environment by the general public. Depending on the extent to which a project would adversely alter the perceived visual character and quality of the environment, a visual or scenic impact may occur. Familiarity with the following terms and concepts will aid the reader in understanding the content of this chapter. These terms and definitions are not specific to any one visual resource assessment methodology (i.e., neither TRPA nor USFS), but instead are general in nature such that the setting can be described in a manner that allows for adequate assessment of visual impacts under either framework. These concepts are routinely used by the California Public Utilities Commission (CPUC) in visual impact assessment of projects throughout California for which it serves as lead agency under the California Environmental Quality Act (CEQA).

Visual Quality is defined as the overall visual impression or attractiveness of an area as determined by the particular landscape characteristics, including landforms, rock forms, water features, and vegetation patterns. The attributes of line, form, and color combine in various ways to create landscape characteristics whose variety, vividness, coherence, uniqueness, harmony, and pattern contribute to the overall visual quality of an area. For the purposes of this EIS/EIS/EIR, visual quality is defined according to three levels:

- *Indistinctive, or industrial*: generally lacking in natural or cultural visual resource amenities typical of the region
- *Representative*: typical or characteristic of the region's natural and cultural visual amenities
- *Distinctive*: unique or exemplary of the region's natural or cultural scenic amenities

It is important to note that the visual quality of a particular scene or viewpoint is judged within the context of the general visual character of an area.

Viewer Exposure addresses the variables that affect viewing conditions from potentially sensitive areas. Viewer exposure considers the following factors:

- Landscape visibility – the ability to see the landscape
- Viewing distance – the proximity of viewers to the proposed project
- Viewing angle – whether the proposed project would be viewed from above (superior), below (inferior), or from a level (normal) line of sight
- Extent of visibility – whether the line of sight is open and panoramic to the project area or restricted by terrain, vegetation and/or structures
- Duration of view – the elapsed time the project area would be visible to a particular viewer

Viewer Types and Degree of Use pertain to the types of use (i.e., public viewers including recreationist and motorist) and amounts of use (i.e., number of recreational users or motorists) that various land uses receive.

Visual Sensitivity is the overall measure of the susceptibility of an existing landscape to adverse visual changes. People in different visual settings, typically characterized by different land uses in the vicinity of a project, have varying degrees of sensitivity to changes in visual conditions, often depending on the overall visual characteristics of the place. In areas of more distinctive visual quality, such as designated scenic highways, designated scenic roads, parks, and recreation and natural areas, visual sensitivity is characteristically more pronounced. In areas of more indistinctive or representative visual quality, sensitivity to change tends to be less pronounced. This analysis of visual sensitivity is based on the combined factors of visual quality, viewer types and numbers of viewers, and visual exposure to the project. Visual sensitivity is described as high, moderate, or low, depending on these factors.

Scenic Vista: A scenic vista is generally considered to be a location from which the public can experience unique and exemplary high-quality views—typically from elevated vantage points that offer panoramic views of great breadth and depth.

REGIONAL LANDSCAPE SETTING

The proposed project is located in the Lake Tahoe Region, which is centered on Lake Tahoe, and straddles the northern edge of the California-Nevada state border. It is a mountainous area located in the Sierra Nevada, west of the Carson Range. Approximately three-quarters of the land in the region is publicly owned, and the majority of the land is managed by the USFS. Lake Tahoe is world renowned for its crystal clear water and picturesque setting. The lake is approximately 12 miles wide and 22 miles long, with about 75 miles of shoreline. The surface elevation of Lake Tahoe is approximately 6,000 feet above sea level, with surrounding peaks rising to almost 11,000 feet above sea level. Near the project area, Mount Watson rises to 8,424 feet and Mount Pluto rises to 8,617 feet.

The dominant vegetation is softwood forest stands (conifers) which, at near distances, provide strong vertical lines, locally interspersed with open meadows. Although the dark coniferous forests contribute to a stable framework for the area's visual character, seasonal changes introduce a dramatic variation to this landscape character. During winter, snow cover accentuates areas that are not forested, which can create a strong visual contrast in areas of timber harvesting, ski slopes, roadways, transmission rights-of-way (ROWs), and other places where the unforested ground is visible. Development is mostly clustered around the shoreline of Lake Tahoe and in a few level or moderately sloping areas. The region experiences a peak population with summer vacationers; however, it is also popular as a winter tourist destination for skiing and snow-related sports.

STUDY AREA VIEWSHED AND VISIBILITY

For the purpose of describing the visual setting and analyzing project impacts, the study area is defined as the project's viewshed, that area of land, water, and other environmental elements that are visible to the human eye from a fixed vantage point, and more specifically, the portion of its viewshed from which the public could perceive changes in the landscape caused by the proposed project. Any other location or viewer group not exposed to visual effects of the project (i.e., outside the study area) is not relevant to this section. Geographic Information System (GIS) tools are a highly effective means of establishing a project's viewshed, especially for the purposes of determining from which areas the project *would not* be visible. However, standard GIS viewshed tools typically consider only observer points relative to surrounding topography, which is most effectively used in landscapes without intervening vegetation or structures, such as dry deserts or pasturelands, but will vastly overestimate the real viewshed of projects in developed and/or forested landscapes, such as the project area.

Because the proposed project consists of several linear overhead power lines, its viewshed is actually represented by a cumulative viewshed, consisting of many poles along several linear routes. The total viewshed

of the project is represented by combining each pole's individual viewshed into one spatial dataset that represents the number of individual poles visible from any fixed vantage point. Exhibit 4.4-3 shows the project's potential viewshed, as calculated from a 10-meter resolution digital elevation model (DEM) and confined to a 4-mile buffer around all proposed facilities, facility upgrades/modifications, and temporary work areas. Four miles is defined by the USFS as the boundary between the middleground and background zone (USFS 1995). A 4-mile buffer was used because proposed poles, conductors, and tree removal, even if theoretically visible from farther away based on terrain, would be indistinguishable from other background elements due to the small apparent size, angle of view, and viewing context. Exhibit 4.4-3 also shows the boundary between USFS-defined distance zones, which are 300 feet (immediate foreground/foreground), 0.5 mile (foreground/middleground), and 4 miles (middleground/background).

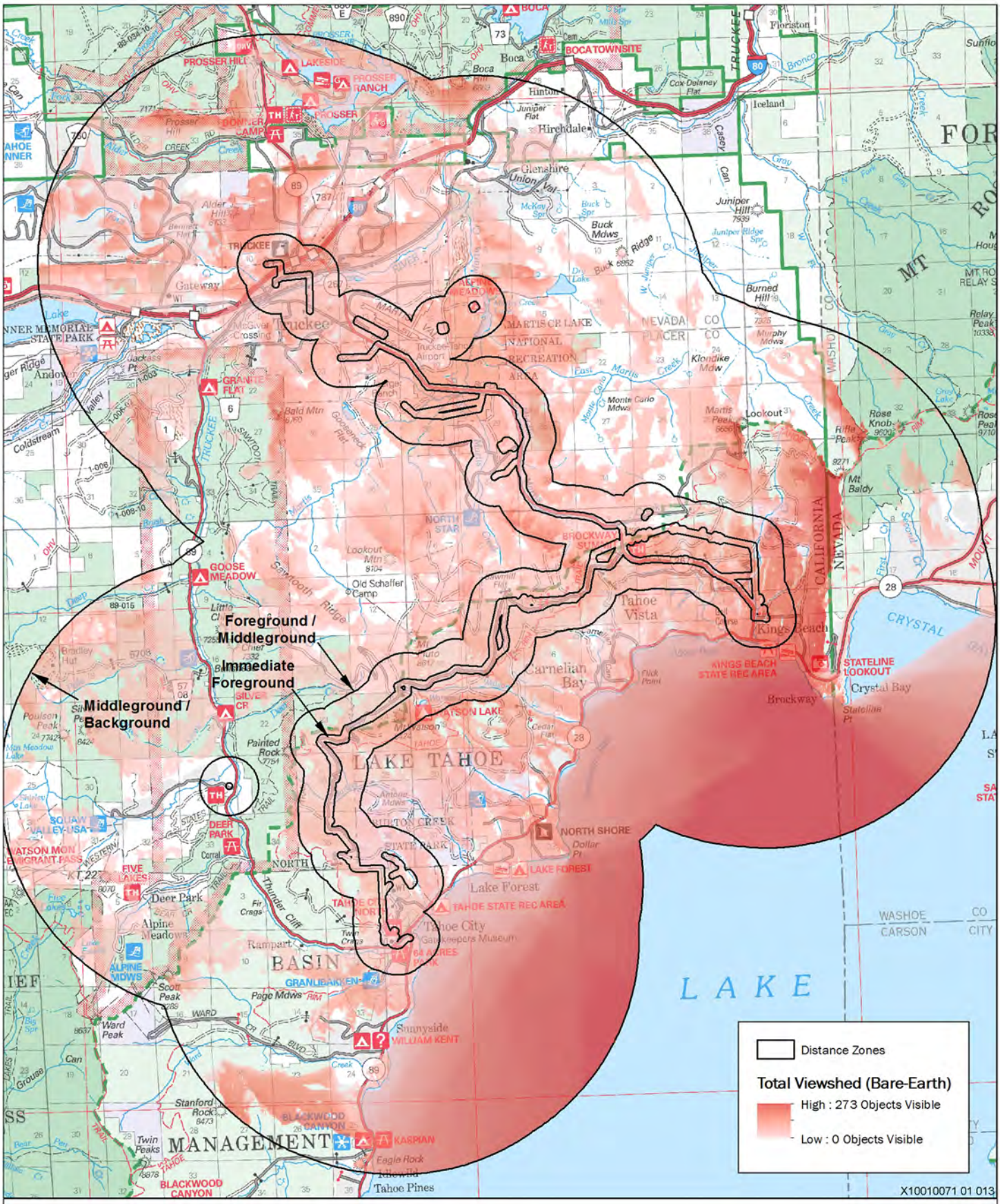
As indicated above, because the landscape is forested, the viewshed shown in Exhibit 4.4-3 vastly overestimates the real viewshed of the project. A small portion of the proposed project consisting of the area surrounding Segments 625-7, 625-8a, 625-9, 650-2 and 650-3 was isolated to demonstrate the effect of a confined landscape on the real viewshed. A "confined" landscape is characterized by trees or other features that limit a viewer's field of vision, such that only foreground views of the landscape are available. Using an ultra-high resolution (0.5-meter) Light Detection and Ranging (LiDAR) dataset of this area—which contains both a bare-earth DEM and a "highest hit" DEM—trees and fine-scale landscape elements (such as cuts and fills) could be incorporated into viewshed calculations. A small area was chosen due to the high computational demands of ultra-high resolution data. This area in particular was chosen because it is at the intersection of several travel corridors with high recreational and scenic value including the Fiberboard Freeway, the Tahoe Rim Trail, and SR 267. As shown in Exhibit 4.4-4, the viewshed of the existing power lines in this area is confined to areas within or immediately adjacent to the ROW, primarily because of the density and height of existing trees. The height of the tree canopy consistently exceeds the height of the power poles. The Tahoe Rim Trail, though it is in close proximity to the power lines, is outside the viewshed of the lines except briefly as it crosses Mt. Watson Road and SR 267.

Vantage points within the middleground distance zone (i.e., 0.5 to 4 miles from the proposed project) would require a very specific set of circumstances to occur for the proposed project to be visible. From this distance, the color/texture contrast in the landscape caused by vegetation clearing would be more noticeable than the poles and the conductors themselves, particularly during the winter. Because of the height and density of trees in the landscape, cleared ROWs tend to be easily hidden from view, especially if viewed at an oblique or inferior angle. The project would only be visible to observers within this distance zone if: 1) the immediate foreground is clear of obstructions (e.g., a meadow, a field, or a large parking lot), 2) the line of sight is otherwise uninterrupted, and 3) the power line ROW is aligned in the same direction as the viewer's line of sight. Otherwise, the power line is likely to remain hidden from view; if it crosses perpendicular or obliquely to the viewer's line of sight, the height of trees on either side of the cleared ROW would mask the gap, even in steeply sloped areas.

For the reasons stated above, the "study area" shall refer to the immediate foreground of all proposed project components, and certain locations in the distant foreground and middleground distance zone that meet the viewing conditions described above.

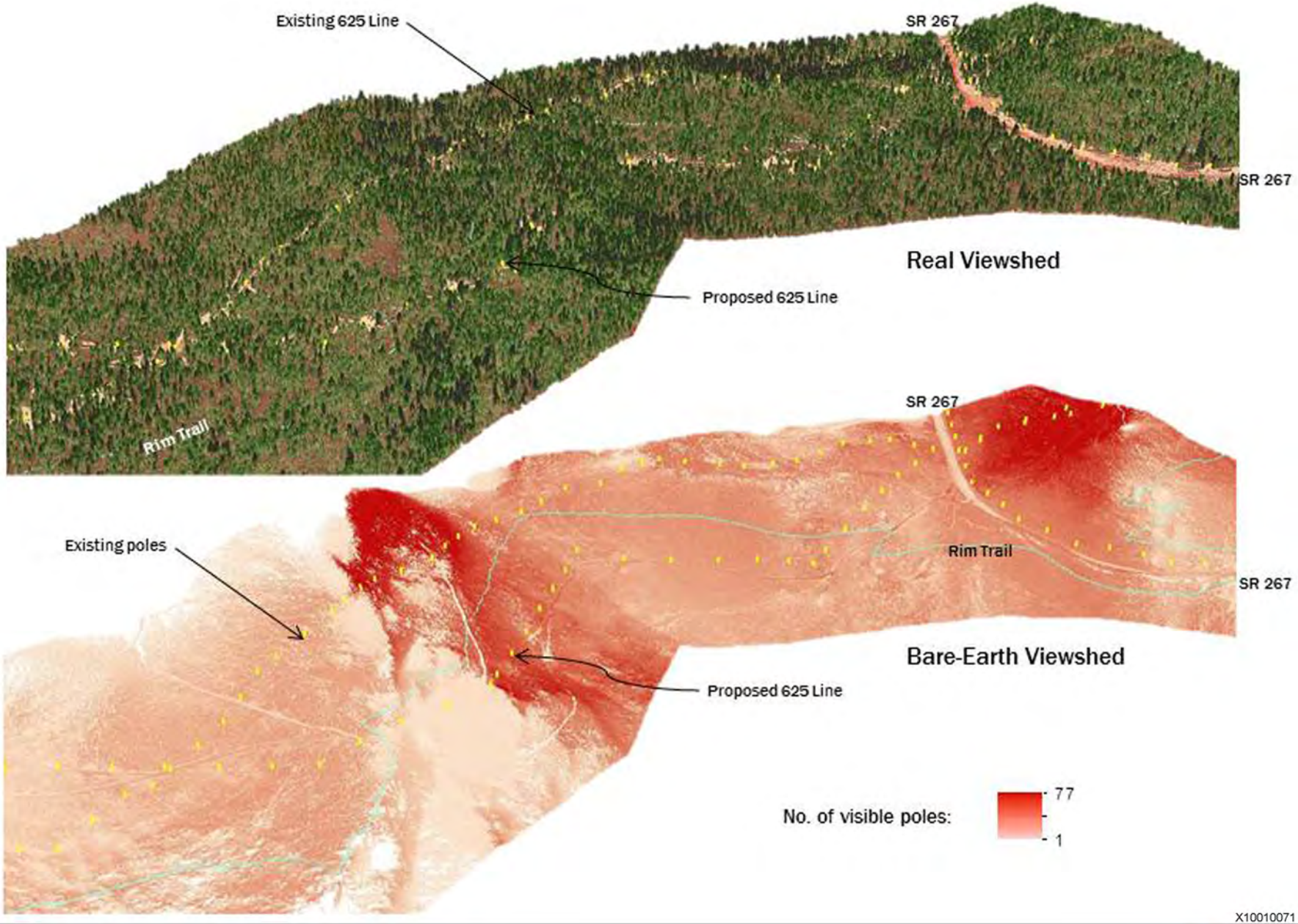
VISUAL CHARACTER AND QUALITY OF THE STUDY AREA

The visual character of study area can be generally described in terms of three distinct visual contexts: developed communities, undeveloped portions of the Lake Tahoe Basin, and the Martis Valley. In terms of visual environments described in the SQIP design review guidelines, developed communities are inclusive of "urban areas" and "urban transition areas" whereas undeveloped portions of the Lake Tahoe Basin are equivalent to rural areas. The following pages contain photographs illustrating the visual character and quality of each portion of the project area. Exhibit 4.4-5 shows the location and direction of view for each photo, and Exhibits 4.4-6A through 4.4-6L include the images themselves.



Source: data received from Dudek in 2013

Exhibit 4.4-3 Potential Viewshed and Distance Buffers



Source: data received from Dudek in 2013

Exhibit 4.4-4

Real Viewshed and Bare-Earth Viewshed of Existing Poles

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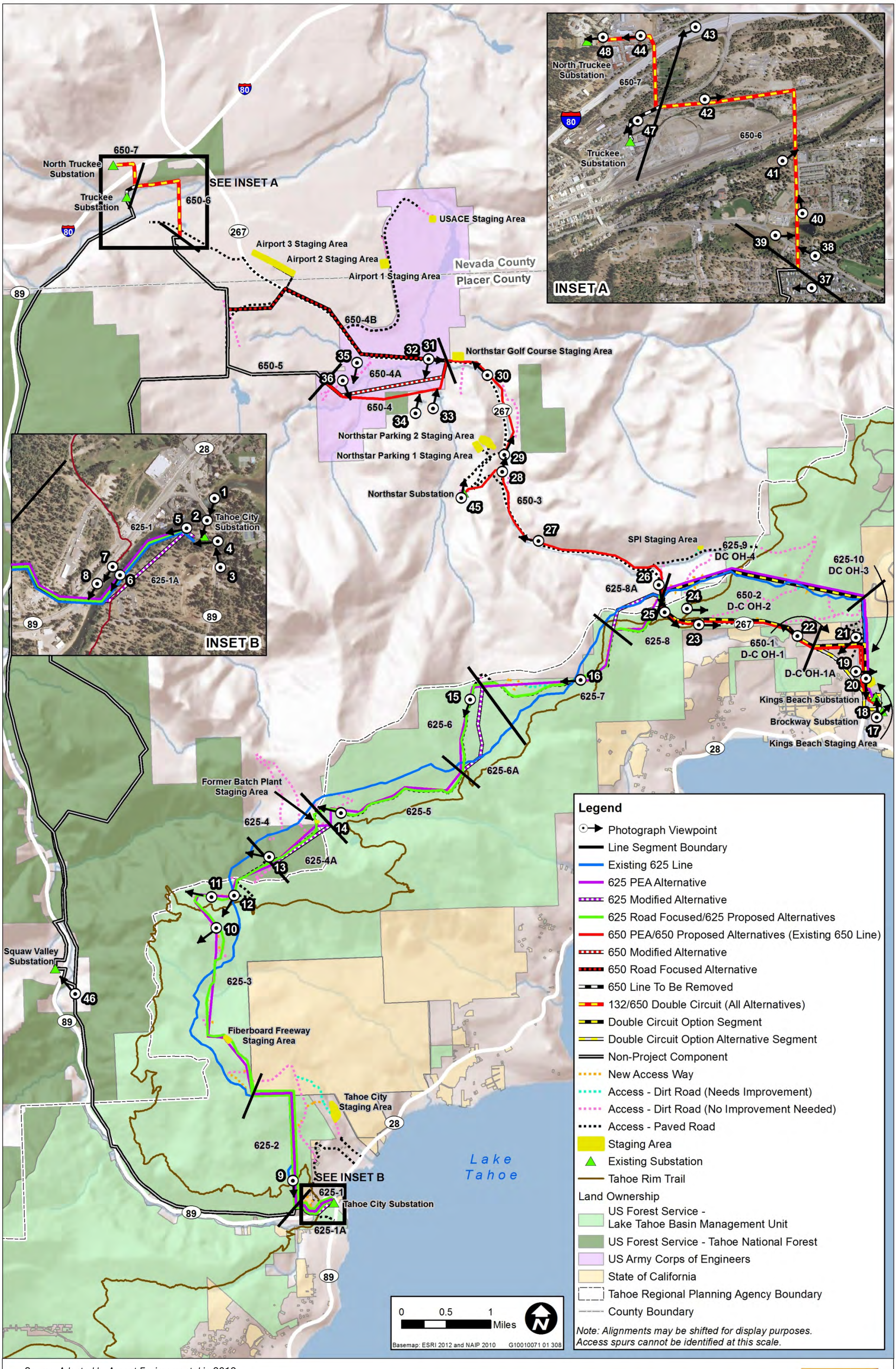


Source: Adapted by Ascent Environmental in 2012

Exhibit 4.4-5 Photograph Locations

Photograph 1: Lakeside Trail at the Truckee River outlet looking south

Photograph 2: State Route 89 at William B. Layton Park looking south

Photograph 3: State Route 89 (West Lake Boulevard) looking north

Photograph 4: State Route 89 (West Lake Boulevard) looking west

Source: Sierra Pacific 2010

Exhibit 4.4-6A Views in the Project Area

Photograph 5: Truckee River Bike Trail looking west

Photograph 6: Pedestrian bridge over the Truckee River looking southwest

Photograph 7: Recreation trail at the pedestrian bridge looking southwest

Photograph 8: State Route 89 west of Fairway Drive looking southwest

Source: Sierra Pacific 2010

Exhibit 4.4-6B Views in the Project Area

Photograph 9: View from the Tahoe Rim Trail looking south

Photograph 10: View from the Tahoe Rim Trail looking southwest

Photograph 11: Fiberboard Freeway west of Mount Watson looking west

Photograph 12: Fiberboard Freeway looking south

Source: Sierra Pacific 2010

Exhibit 4.4-6C Views in the Project Area

Photograph 13: Fiberboard Freeway looking west

Photograph 14: Fiberboard Freeway north of Mount Watson looking west

Photograph 15: Fiberboard Freeway looking south

Photograph 16: Fiberboard Freeway west of State Route 267 looking west

Source: Sierra Pacific 2010

Exhibit 4.4-6D Views in the Project Area

Photograph 17: Brockway Substation entry on Cut Throat Ave looking northeast

Photograph 18: Deer Street near Cut Throat Avenue looking north

Photograph 19: Cambridge Drive looking east

Photograph 20: Trail behind Cambridge Drive looking south

Source: Sierra Pacific 2010

Exhibit 4.4-6E Views in the Project Area

Photograph 21: Bristol Circle at Commonwealth Drive looking southwest

Photograph 22: State Route 267 near Kings Beach looking northwest

Photograph 23: State Route 267 near the Tahoe Rim Trail looking east

Photograph 24: Tahoe Rim Trail near State Route 267 looking east

Source: Sierra Pacific 2010

Exhibit 4.4-6F Views in the Project Area

Photograph 25: State Route 267 near Brockway Summit looking southeast

Photograph 26: State Route 267 looking south towards the existing 625 Line crossing

Photograph 27: State Route 267 looking northwest

Photograph 28: State Route 267 south of Northstar Drive looking north

Source: Sierra Pacific 2010

Exhibit 4.4-6G Views in the Project Area

Photograph 29: State Route 267 near Northstar Drive looking north

Photograph 30: State Route 267 in Martis Valley looking northwest

Photograph 31: State Route 267 in Martis Valley looking east

Photograph 32: State Route 267 in Martis Valley looking south

Source: Sierra Pacific 2010

Exhibit 4.4-6H Views in the Project Area

Photograph 33: Northstar-at-Tahoe Golf Course looking north

Photograph 34: Basque Drive looking north

Photograph 35: Martis Creek Trailhead looking south

Photograph 36: Martis Creek Trail looking south

Source: Sierra Pacific 2010

Exhibit 4.4-6I Views in the Project Area

Photograph 37: Star Pine Road looking west

Photograph 38: Brockway Road looking northwest

Photograph 39: Brockway Road looking east

Photograph 40: Estates Drive at Riverview Drive looking north

Source: Sierra Pacific 2010

Exhibit 4.4-6J Views in the Project Area

Photograph 41: Truckee River Legacy Trail looking northeast

Photograph 42: Glenshire Drive looking east

Photograph 43: Interstate 80 westbound near Donner Pass Road looking west

Photograph 44 : Pioneer Trail Road looking west towards North Truckee Substation

Source: Sierra Pacific 2010

Exhibit 4.4-6K Views in the Project Area

Photograph 45: Northstar Substation looking north

Photograph 46: Squaw Valley Substation from Squaw Valley Road at State Route 89

Photograph 47: Donner Pass Road looking southwest towards the Truckee Substation

Photograph 48: North Truckee Substation from Pioneer Trail Road looking west

Source: Sierra Pacific 2010

Exhibit 4.4-6L Views in the Project Area

DEVELOPED COMMUNITIES

Sections of the study area, including proposed power line Sections 625-1, 625-10, 650-1, 650-6 and 650-7, are located in the communities of Tahoe City, Kings Beach, and Truckee. These areas have a mix of developments, including low-density residential housing; commercial, retail, and tourism-related establishments; and public utility infrastructure including overhead electric lines. On the fringes of these communities is typically an urban transition zone between intensely developed areas and a fully natural-appearing landscape characterized by sporadic occurrence of driveways, rural homes on large lots, and electrical distribution lines within a predominantly forested context.

Tahoe City

Photographs 1 through 8 (Exhibits 4.4-6A and 4.4-6B) show the general areas surrounding the proposed upgrade to the 625 Line (Segment 625-1) in Tahoe City. In this area, particularly in and around the "Y" (i.e., the intersection of SR 89 and SR 28), the visual character was described in the 1982 Lake Tahoe Basin Scenic Resource Inventory as cluttered, but has improved in recent years (TRPA 2011). Developments are nestled among pine trees, and the Truckee River is a scenic amenity that contributes positively to views. However, as seen from SR 89 and SR 28, commercial development, parking areas, utility lines, and signage are prominent enough to distract from what might otherwise be a scenic view of the Truckee River and the surrounding environment. This general visual character is reflected in TRPA's rating of the area as being in non-attainment of scenic thresholds for Roadway Travel Unit 42. The public experiences partially screened views of the Tahoe City Substation (shown in Photographs 1 through 4), which is on the west side of SR 89 just south of the Truckee River. Recreational amenities, including pedestrian and bike paths, the Truckee River, and a pedestrian bridge (shown in Photographs 5 through 8) provide access to scenic and recreational opportunities, but the quality of views in these areas are somewhat compromised by the presence of structures, utility poles, and conductors.

Overall, the visual quality in the portion of the study area in Tahoe City can be considered representative to locally indistinct, depending on location, view direction, and other viewing circumstances. Despite the presence of the Truckee River, high quality views from public travel routes are not available in views directed towards the site of the proposed substation upgrade.

Kings Beach

Photographs 17 through 21 (Exhibits 4.4-6E and 4.4-6F) show the general areas surrounding the proposed upgrade to the 625 Line (Sections 625-10 and 650-1) on the outskirts of Kings Beach. The Kings Beach Substation is at the northern edge of the community of Kings Beach in a forested area that has residential and industrial land uses to the south and is surrounded by forest on the other three sides. This substation is setback from public transportation routes, as shown in Photograph 17 (Exhibit 4.4-6E). The general area can be described as an urban transition zone; it has a predominantly natural appearance and a thick density of trees with occasional signs of development, such as parked vehicle, driveways, utility poles, street signs, small graded areas, and houses and structures fully to partially screened by trees.

Overall, the visual quality of these sections of the study area is considered representative of an urban transition zone. The affected portion of SR 267 (Roadway Travel Unit 41) is in attainment of threshold standards for scenic quality and travel route ratings.

Truckee

Photographs 37 through 44 (Exhibits 4.4-6J and 4.4-6K) show the general areas surrounding the proposed upgrade to the 650 Line (Segments 650-6 and 650-7) within and adjacent to the Town of Truckee. For the same reasons discussed above for Kings Beach, the visual quality of these sections of the study area is considered representative of an urban transition zone.

UNDEVELOPED PORTIONS OF THE LAKE TAHOE BASIN

Most of the proposed power line upgrades would occur within undeveloped portions of the Lake Tahoe Basin, in mountainous terrain of fir, pine, and cedar forest areas. The forest cover is mostly dense; openings and patches of meadow are relatively rare and infrequent as compared to areas of the High Sierra along the Pacific Crest west of Lake Tahoe. Within the study area, the density of trees and height of the canopy varies, but is sufficiently widespread and ever-present that unencumbered long-distance views and scenic vistas are only available from wide graded areas on moderate to steep slopes (such as portions of SR 267 that descend into the Basin and cleared utility ROWs). Along the Fiberboard Freeway, there are a few localized areas where users are afforded long-range views of the landscape; these include high-elevation, steeply-sloped areas along the side slopes of Mount Pluto and Mount Watson. The visual character of the study area in undeveloped portions of the Tahoe Basin is therefore of a confined natural forest, but in a few specific locations, can be punctuated by high quality vistas.

The study area is also characterized by a number of forest roads, as well as recreational routes including the Tahoe Rim Trail and other trails used by the public for dispersed recreation. USFS roads crossing the study area include FS Road 73 (Fiberboard Freeway), 16N46, 16N50, 16N73E, 16N74, 16N95, 16N63, 16N93, 16N92, 16N52, and 16N56. Photographs 9 through 16 (Exhibits 4.4-6C and 4.4-6D) illustrate portions of the study area along the 625 Line between the northern edge of Tahoe City and Brockway Summit along SR 267. The Fiberboard Freeway, a paved road along most of its length, extends westward into the area from SR 267 and provides public access to Mount Watson, Watson Lake, and surrounding areas. Power lines, including the existing 625 Line, cross the Fiberboard Freeway in a number of locations. Although not a dominant element of the landscape character, power poles and conductors, where they “skyline” (i.e., protrude above the horizon) in certain locations (as shown in Photographs 9, 12, and 16), can adversely affect view quality. Otherwise, the vertical form of the poles and their dark brown color mimic the color and form of tree trunks and minimize the apparent visual contrast. For the majority of the public routes in this area, existing power line ROWs are only visible in the immediate foreground where they cross existing roads and trails.

Photographs 22 through 29 (Exhibits 4.4-6F and 4.4-6G) show the portion of the study area along SR 267 in the general area of proposed upgrades to the 625 and 650 Lines in Segments 650-2, 650-3, 625-8 and 625-9. The width of the highway corridor provides openings in the forest sufficient in size to afford viewers with partial middleground and background views of hillsides and the Lake Tahoe Basin. Similar to the context photographs along the Fiberboard Freeway, power lines locally and briefly detract from views where they skyline or cross the highway corridor.

Overall, the visual quality of these sections of the study area is considered representative of the rural/undeveloped portions of the Lake Tahoe Basin. Unique and distinctive aesthetic elements within the study area, such as Lake Watson and scenic vistas from the Tahoe Rim Trail do not contain views of the 625/650 power line corridors.

MARTIS VALLEY

The portion of the proposed project located outside of the Lake Tahoe Basin is within the Martis Valley, which extends north from Lake Tahoe. Martis Valley is bisected by Martis Creek, which flows north to the Truckee River. The northern portions of SR 267 and SR 89 meet I-80 in the northern portion of the valley in the Town of Truckee. Aside from the Town of Truckee itself, the primary developments in the valley include the Truckee Tahoe Airport and several golf courses, as well as electrical and transportation infrastructure. However, as seen from public roadways, the Martis Valley primarily appears in a natural condition, and is sufficiently flat and unobstructed to provide long views of surrounding mountains and forests.

Photographs 31 through 36 (Exhibits 4.4-6H and 4.4-6I) show the portion of the study area within Martis Valley, including Section 650-4 of the 650 Line. The visual character of the valley stands in contrast to the Tahoe Basin by virtue of its grassland and open meadow habitat and largely unobstructed views of the surrounding mountains. Views from travel routes in the area include foreground, middleground, and background elements, with a wide variety of landscape elements of visual interest, including foreground open sage and grassland and background forested mountains. The existing 650 Line crosses SR 267 and leaves the highway heading west where it skirts the edge of the Northstar Golf Course and passes near a small residential area. It continues westward along the southern edge of Martis Valley where the forested slopes of Lookout Mountain rise from south edge of the valley floor. The slopes form a backdrop of trees to views of the power line from Martis Creek Lake National Recreation Area and the network of trails in the valley.

Overall, the visual quality of these sections of the study area is considered representative to distinctive, depending on location, view direction and other viewing circumstances. The open grassland habitat provides view opportunities that are relatively rare and unique in the context of the predominantly forested environment of the Sierra Nevada.

VIEWER TYPES AND EXPOSURES

The primary types of potentially affected viewer groups in the project area include roadway motorists and recreationists. These groups may overlap at times, but for purposes of this analysis, they are described separately. The approach to evaluating viewer types and exposure presented here is routinely used by CPUC in visual impact assessment of its projects.

MOTORISTS

Motorists represent the largest of the affected viewer groups. Included in this group are motorists traveling on regional roadways, such as SRs 28, 89, and 267, and I-80. Motorists include a variety of roadway travelers, both local and regional travelers familiar with the visual setting, and travelers less familiar with the visual setting that use the roadways more infrequently. These less frequent travelers might, for example, utilize these roadways to reach vacation destinations such as Lake Tahoe or ski resorts, or use the roads in the course of their work. These motorists include commuters, drivers of commercial trucks, and drivers of emergency vehicles. Depending upon the road and travel direction, views of the study area could range from a few seconds to 20 minutes or more. The average annual daily traffic on I-80 ranges from 27,000 to 32,000 vehicles. On SR 89 at the SR 28 junction the average annual daily traffic is 10,900 vehicles, and on SR 267 the average annual daily traffic ranges from 8,400 to 12,600 vehicles, depending on location.

VISITORS AND RECREATIONISTS

The second viewer group includes recreational users of the Lake Tahoe area. The LTBMU is a very popular recreation forest with winter sports opportunities that include downhill ski areas and extensive snowmobile and cross-country ski trails found throughout the National Forest. In the summer, an extensive array of hiking, off-highway vehicle (OHV), equestrian, and mountain biking trails provide access to the lakes, rivers, and mountain areas. Developed recreation sites within the LTBMU include campgrounds, boat ramps, picnic areas, and nature trails. None of the power line segments are visible from campsites in the LTBMU, including the Watson Lake Campground. Additional information about the recreational resources in the project area can be found in Section 4.8, Recreation. This section focuses on recreation resources from which portions the proposed project could be visible. Although the total duration of views of the 625/650 Line ROWs for this group of users tends to be brief, the expectation of a natural landscape setting raises visual sensitivity to moderate to high levels.

Recreational trails and facilities from which the proposed project could be visible include the following.

- **Martis Creek Lake Recreation Area**, in the northern portion of the project area, is managed by the US Army Corps of Engineers (USACE) and provides recreation activities including camping, hiking, ranger programs, boating, fishing, and day use. On the west side of SR 267, the Martis Creek Wildlife Area offers a 4.3-mile hiking and biking trail that loops around the valley.

- **Burton Creek State Park** contains more than 2,000 acres of forest and meadowland. Facilities consist of a network of dirt roads and trails, two small dams, two water tanks, and a few signs. The roads into Burton Creek State Park are gated and only California State Parks and emergency vehicles are allowed on the roads in the park. The roads and trails are used by hikers and bikers during the summer, and cross-country skiers and snowshoe hikers in the winter. The proposed project would be largely out of view from these areas except for a short segment of the 625 Line that would graze the southwest portion of the park.

- **The Tahoe Rim Trail**, shown in Exhibit 4.4-5, is a 165-mile, single-track, multi-use trail encircling Lake Tahoe. Throughout the project vicinity, the trail is located on LTBMU lands and is open to hikers, equestrians, and mountain bikers. Winter use by cross-country skiers and snowshoers is also popular. There is a trailhead in Tahoe City near the Community Center on Fairway Drive. From that location, the trail ascends to overlook the Truckee River Canyon, and then extends north and east past Watson Lake more than 20 miles to the trailhead on SR 267, 0.5-mile south of Brockway Summit. Along this segment, the trail generally parallels the existing and proposed 625 Line alignments, crossing under the existing 625 Line twice (see Exhibit 4.8-5). Trail users can cross SR 267 and beneath the existing 650 Line to a trailhead on the east side of the highway. From there, the trail continues northeastward, crosses beneath the existing 625 Line again, and continues toward Martis Peak. As shown in Exhibit 4.4-4, trail users are exposed to views of the power lines only briefly because the viewshed of the existing line is highly localized due to the screening effect of the forest.

- **The Fiberboard Freeway,** a network of LTBMU service roads (including FS Roads 16N46, 16N50, 16N73E, 16N74, 16N95, 16N63, 16N93, 16N92, 16N52, and 16N56), and Fire Road 6, on the Tahoe National Forest provide access to numerous opportunities for dispersed recreation. In the winter, this includes snowmobiling, snowshoeing and cross country skiing; in the summer this includes OHV, cyclists, joggers and/or hikers.

- **Truckee River Regional Park** is located just south of Downtown Truckee on SR 267. The 62-acre park's recreation facilities include: ball fields; picnic areas; a rodeo arena; a nature trail; tennis, volleyball and basketball courts; amphitheater; tot lot; skateboard park; disc golf course; and playground equipment. Segment 650-6 is adjacent to the eastern border of the park (TDRDP 2012).

- **Northstar Resort Golf Course** is an 18-hole course that incorporates the mountainous landscapes of Tahoe with the open meadow of Martis Valley into two 9-hole settings (Vail 2012). A portion of Segment 650-4 would cross a northern portion of the property.

- **64-Acre Recreation Site** is located near the southern terminus of the existing 625 Line (Segment 625-1) in Tahoe City. The alignment runs adjacent to the south side of the Truckee River (between 0 to 10 feet from the top of the bank) for approximately 0.2 mile. This portion of the line is adjacent to the 64-Acre Recreation Site, which provides picnic facilities, hiking and biking trails, and a rafting ramp for access to the Truckee River. The 64-Acre Recreation Site and the Truckee River Bike Trail that passes through the site and alongside the Truckee River are among these facilities. Elements of the proposed project would be visible from this park and trail.

- **Gatekeeper's Museum and Lake Tahoe Dam** are located in an area immediately east of SR 89 atop and south of the Truckee River. The dam has a restaurant that affords diners views of Lake Tahoe and the Truckee River. The museum is visited by over 10,000 visitors annually and contains an eclectic collection of Tahoe history, including photographic collections, oral histories and transcription, newspapers, court

ledgers, maps and written materials, letters, clothing, artifacts, and furniture. Visitors may have partial views of the Tahoe City Substation across SR 89 and portions of the existing 625 Line along the south bank of the Truckee River. The exposure to project facilities is similar to the views shown referenced in Exhibit 4.4-5.

- **River Rafting** operations occur on the Truckee River downstream of the dam with several commercial rafting operations in the vicinity. The rafts depart from piers and ramps that project out into the river in this area.

- **Kings Beach Snowmobile** activities occur on approximately 100 miles of recreational trail in the project area. The trail transects several segments of the 625 Line routes. Lake Tahoe Snowmobile Tours, Inc. and Full Throttle are two snowmobile rental /tour businesses that operate out of Kings Beach and utilize this trail.

VISUAL SENSITIVITY

The process for selecting key viewpoints for simulation purposes is addressed in Section 4.4.3, Environmental Consequences and Mitigation Measures. However, key viewpoints are referenced here to describe the existing scenic setting, affected viewers, and to evaluate the visual sensitivity of each viewpoint. These viewpoints, as discussed in detail below, represent: 1) sensitive or protected views including public open space and recreation trails, residential areas, and designated scenic roadways or vista points; 2) views that represent the visual experience of a relatively large number of affected viewers; and 3) views that portray a representative range of viewing conditions along the project corridor.

Table 4.4-1 summarizes the viewer groups, visual exposure, and scenic quality represented by 15 viewpoints. These factors are routinely used by CPUC in visual impact assessment of its projects. CPUC visual impact assessment methodology considers visual sensitivity as a composite measurement of the overall susceptibility of an area or viewer group to adverse visual or aesthetic impacts given the combined factors of landscape visual quality, viewer types, and exposure conditions which are considered together to determine an overall visual sensitivity for each viewpoint. The viewpoints listed in Table 4.4-1 are shown in the "existing" photographs in Exhibits 4.4-8 through 4.4-23 and Exhibit 4.4-25.

Table 4.4-1 Viewer Types, Visual Exposures, and Visual Quality

Key Viewpoint No. / Name	Viewer Group(s)	View Exposure	Visual Quality	Visual Sensitivity
VP 1, Tahoe City Substation	Motorists and Pedestrians	Partially blocked by building, enclosed view framed by trees, viewers experience passing view	Indistinctive to Representative	Low to Moderate
VP 2, Tahoe City Substation	Motorists and Pedestrians	Nearly fully screened by trees, viewers experience brief passing views	Indistinctive to Representative	Low to Moderate
VP 3, Truckee River Corridor	Pedestrians and Cyclists, Tahoe Rim Trail Users	Unencumbered view includes slight skylining of existing pole. Viewers experience passing, and brief stationary views of the river corridor	Distinctive	High
VP 4, Segment 650-3	Motorists	Wide panoramic view unencumbered by foreground elements. Viewers experience moderate duration views on drives between Truckee and mountains. Skylined power poles and conductors detract from views.	Representative.	Moderate
VP 5, Martis Creek Trail	Motorists	Scenery includes foreground, middleground and background landscape elements. Views are wide and unencumbered. Viewers experience moderate duration views on drives between Truckee and mountains.	Representative	Moderate

Table 4.4-1 Viewer Types, Visual Exposures, and Visual Quality				
Key Viewpoint No. / Name	Viewer Group(s)	View Exposure	Visual Quality	Visual Sensitivity
VP 6, SR 267, Segment 650-2	Motorists, Cyclists	Scenery includes foreground, middleground and background landscape elements. View is partially enclosed by trees, but provides scenic elements of interest. View duration is brief to slightly extended. Existing power poles/ conductors detract slightly from quality of view.	Distinctive.	Moderate to High
VP 7, SR 267, Segment 650-2	Motorists, Cyclists	Scenery includes foreground, middleground and background landscape elements. Partial distant views of Lake Tahoe. Power lines are fully exposed in the view and extend slightly above horizon line. View duration is brief to slightly extended.	Distinctive	Moderate to High
VP 8, SR 89, Segment 625-1	Motorists, Cyclists, and Pedestrians	View enclosed by trees that includes foreground, middleground and background elements. Power poles partially exposed and crossing conductors slightly visible. View duration is brief to slightly extended.	Representative	Moderate
VP 9, Tahoe Rim Trailhead, Segment 625-9	Hikers (summer), Snowshoers and Snowmobilers (winter)	View enclosed by trees and includes distant hills in the background. Existing poles are prominent and protrude strongly above the skyline. Potential for stationary view due to kiosk and exposed viewshed.	Representative	Moderate to High
VP 10, Fiberboard Freeway, Segment 625-3	Motorists, OHV users and Cyclists (summer), Snowmobilers (winter)	View is enclosed by trees; middleground is only partially visible. Large areas of bare ground slightly detract from the quality of the view. Utility ROW views are brief in passing.	Representative	Moderate
VP 11, Fiberboard Freeway, Segment 625-5	Motorists, OHV users and Cyclists (summer), Snowmobilers (winter)	View is surrounded by trees, and limited to foreground elements. Paved and dirt roads are visual elements that are co-dominant with natural features. Utility ROW views are brief in passing.	Representative	Moderate
VP 12, Fiberboard Freeway, Segment 625-7	Motorists, OHV users and Cyclists (summer), Snowmobilers (winter)	Immediate foreground dominated by a stand of trees. Background only slightly visible through road ROW.	Representative	Moderate
VP 13, 64-AcreRecreation Site, Segment 625-1A	Pedestrians and Cyclists	Highly used recreation site. Immediate foreground dominated by a stand of trees. Foreground/background hidden from view.	Distinctive	Moderate to High
VP 14, Fiberboard Freeway, Segment 625-4A	Motorists, OHV users and Cyclists (summer), Snowmobilers (winter)	View fully enclosed by trees. View duration is brief and in passing.	Representative	Moderate
VP 15, SR 267, Segment 650-2 D-C OH-2	Motorists and Cyclists	Scenery includes foreground, middleground and background landscape elements. Partial distant views of Lake Tahoe. Power lines are fully exposed in the view and extend slightly above horizon line. View duration is brief to slightly extended.	Distinctive	Moderate to High

4.4.3 ENVIRONMENTAL CONSEQUENCES AND RECOMMENDED MITIGATION MEASURES

SIGNIFICANCE CRITERIA

Because the proposed project falls under multiple jurisdictions and would require decisions or approvals from multiple agencies, namely the TRPA, USFS and CPUC, a number of significance criteria apply. The purpose and intent of the various measures are frequently overlapping and the same discussions and analyses can be used to address the requirements of multiple agencies. Following the listing of individual criteria is a discussion of the overall approach to assessing the significance of scenic resource impacts of the proposed project.

TRPA CRITERIA

The "Light and Glare" and "Scenic Resources/Community Design" criteria from the TRPA Initial Environmental Checklist were used to evaluate the scenic resources impacts of the alternatives. The checklist inquires as to whether the proposed project would result in any of the following conditions.

- Be visible from any state or federal highway, Pioneer Trail or from Lake Tahoe?
- Be visible from any public recreation area or TRPA designated bicycle trail?
- Block or modify an existing view of Lake Tahoe or other scenic vista seen from a public road or other public area?
- Be inconsistent with the height and design standards required by applicable ordinances or Community Plans?
- Be inconsistent with the TRPA SQIP or Design Review Guidelines?
- Include new or modified sources of exterior lighting?
- Create new illumination which is more substantial than other lighting, if any, within the surrounding area?
- Cause light from exterior sources to be cast off-site or onto public lands?
- Create new sources of glare through the siting of improvements or the use of reflective materials?

TRPA maintains applicable threshold standards for scenic resources in its threshold carrying capacities. For the purposes of this analysis, a significant scenic resource impact would result if implementation of the proposed project would result in one or more of the following:

- a decrease in Roadway travel route ratings below the minimum required for threshold attainment;
- a decrease in Scenic Quality Ratings;
- a decrease in Public Recreation Areas and Bike Trails Ratings; or
- violation of the adopted Community Design threshold by failing to comply with site planning or design principles contained in the TRPA Code.

NEPA CRITERIA

An environmental document prepared to comply with NEPA must consider the context and intensity of the environmental effects that would be caused by or result from the proposed action. Context means that the significance of the action must be considered in terms of the region as whole, affected interests, and the specific locality. Intensity refers to the severity of an effect. Under NEPA, the significance of an effect is used solely to determine whether an EIS must be prepared. A decrease in scores or ratings assigned to landscape units in scenic resources inventories conducted by either USFS or TRPA would constitute an adverse impact.

VQOs under the USFS framework commit lands to specific levels of visual quality, which becomes part of the overall land management plans adopted for each Forest. The USFS visual management system was designed to: 1) inventory visual resources and provide the basis for ascribing visual resource management objectives to lands under agency management, and 2) to determine whether a proposed action or its alternatives would meet those management objectives. While visual management objectives (identified on Exhibit 4.4-1 and discussed in the regulatory setting) will frequently reflect the baseline visual inventory of the landscape, that is not always the case, and VQOs do not in and of themselves offer a NEPA-compliant framework for identifying the intensity of impacts on visual resources or the significance of those impacts. Specifically, the degree of visual change that constitutes a significant impact is not defined and no criteria or standards for significance are offered. However, because conformance or non-conformance with VQOs relate to the project's consistency with plans and policies, these are addressed separately (under Impact 4.4-3 below).

CEQA Criteria

Based on Appendix G of the State CEQA Guidelines, an alternative would have a significant impact on scenic resources if implementation of the alternative would do any of the following:

- have a substantial adverse effect on a scenic vista;
- substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway;
- substantially degrade the existing visual character or quality of the site and its surroundings; or
- create a new source of substantial light or glare that would adversely affect day or nighttime views in the area.

Overall Approach

Given that the analysis of scenic resources in the EIS/EIS/EIR must be consistent with multiple criteria and measures, as identified above, scenic impact statements were organized in a manner that allows a coherent discussion of visual impacts while considering all relevant criteria and measures. Because the proposed project would not be visible from an officially designated state scenic highway, the second criteria listed in Appendix G of the State CEQA Guidelines (i.e., substantial damage to scenic resources […] within a state scenic highway) is not applicable and is not discussed further.

METHODS AND ASSUMPTIONS

Potential project-related impacts to scenic resources were analyzed by determining the nature and extent of anticipated changes to the existing visual environment that would result from construction and operation of the proposed project and comparing those anticipated changes to the criteria of significance described above. The analysis involved field reviews of the project area plus reviews of project data, including maps and drawings provided by the applicant, aerial and ground-level photographs of the project area, planning documents, and the preparation of computer-based visual simulations. Specific project data included the Proponent's Environmental Assessment (Sierra Pacific 2010), power line pole designs and configurations, pole heights and locations, substation plans and elevation drawings, and proposed construction methods and long term maintenance practices.

Selection of Simulation Viewpoints

The purpose of visual simulations is to document the project-related change that would be visible from representative sensitive viewpoints or viewing locations. The visual simulations provide an analytical tool for

developing a technically sound assessment of visual impacts. The simulations also facilitate clear and objective communication of visual impacts.

Field observations and review of photography, technical data, and plans and policies pertaining to visual resources management were used as a basis for selecting simulation viewpoints. Selection of the simulation viewpoints was determined in consultation with the applicant, USFS, and TRPA. The following criteria were used to select key viewpoints:

- sensitive or protected views including public open space and recreation trails, residential areas, and designated scenic roadways or vista points;
- views that represent the visual experience of a relatively large number of affected viewers; and
- views that portray a representative range of viewing conditions along the project corridor (i.e., varied viewing distance and landscape character).

In addition, key viewpoints were limited to publically accessible ground level viewing locations that represent what the public actually sees. Therefore, oblique aerial or "birdseye" views were not considered appropriate for visual impact assessment purposes.

PROJECT SIMULATIONS

A set of 17 visual simulations were produced to illustrate before and after visual conditions in the project area. The simulations illustrate the location, scale, and appearance of the project as seen from representative public viewpoints. With the exception of Viewpoints 7 and 15, the visual simulation photographs were taken using a digital single lens reflex camera with a 50-millimeter equivalent lens which represents a horizontal view angle of 40 degrees. A 28-millimeter equivalent lens representing a 65-degree horizontal view angle was employed to shoot the Viewpoints 7 and 15 simulation photographs to portray a wider angle view of the project that includes elements in the surrounding landscape context.

The visual simulations were generated using an objective analytical and computer modeling process. Briefly, GIS data of existing conditions and digital aerial photographs provided the basis for developing an initial digital model. A three-dimensional model of the proposed power poles and substation structures and equipment was developed using engineering design data and GIS project data supplied by the applicant. The three-dimensional computer model of the proposed project components was combined with the digital site model to produce a complete computer model of the project. A set of computer-generated perspective plots were then produced to represent the selected viewpoints.

For each of the simulation viewpoints, viewer eye level was assumed to be 5 feet above grade. Computer wireframe perspective plots were overlain on photographs to verify scale and viewpoint location. Digital visual simulation images were then produced based on computer renderings of the three-dimensional model combined with digital versions of the selected site photographs.

The location of each simulation is shown in Exhibit 4.4-7. The existing views and corresponding computer-based visual simulations are presented in Exhibits 4.4-8 through 4.4-23 and Exhibit 4.4-25.

IMPACT DETERMINATION

The significance and intensity of impacts to visual resources is determined using the TRPA, NEPA, and CEQA significance criteria listed above and in Table 4.4-2. The table provides guidelines to assist in evaluating effects of the project on the visual character or quality of an area, and is based on the visual sensitivity of key viewpoints and the degree of overall visual change introduced by the project within the view. The key factors in determining the overall visual change are visual contrast, dominance, and view blockage. This approach is

routinely used by CPUC in visual impact assessment of its projects. Specifically, an adverse visual impact may occur when: 1) an action perceptibly and substantially changes, in an adverse way, the existing physical features of the landscape that are characteristic of the region or locale; 2) an action introduces new features to the physical landscape that are perceptibly uncharacteristic of the region or locale, or become visually dominant from common viewpoints; or 3) an action blocks or totally obscures aesthetic features of the landscape. The degree of visual impact depends on how noticeable the adverse change is and the related visual sensitivity.

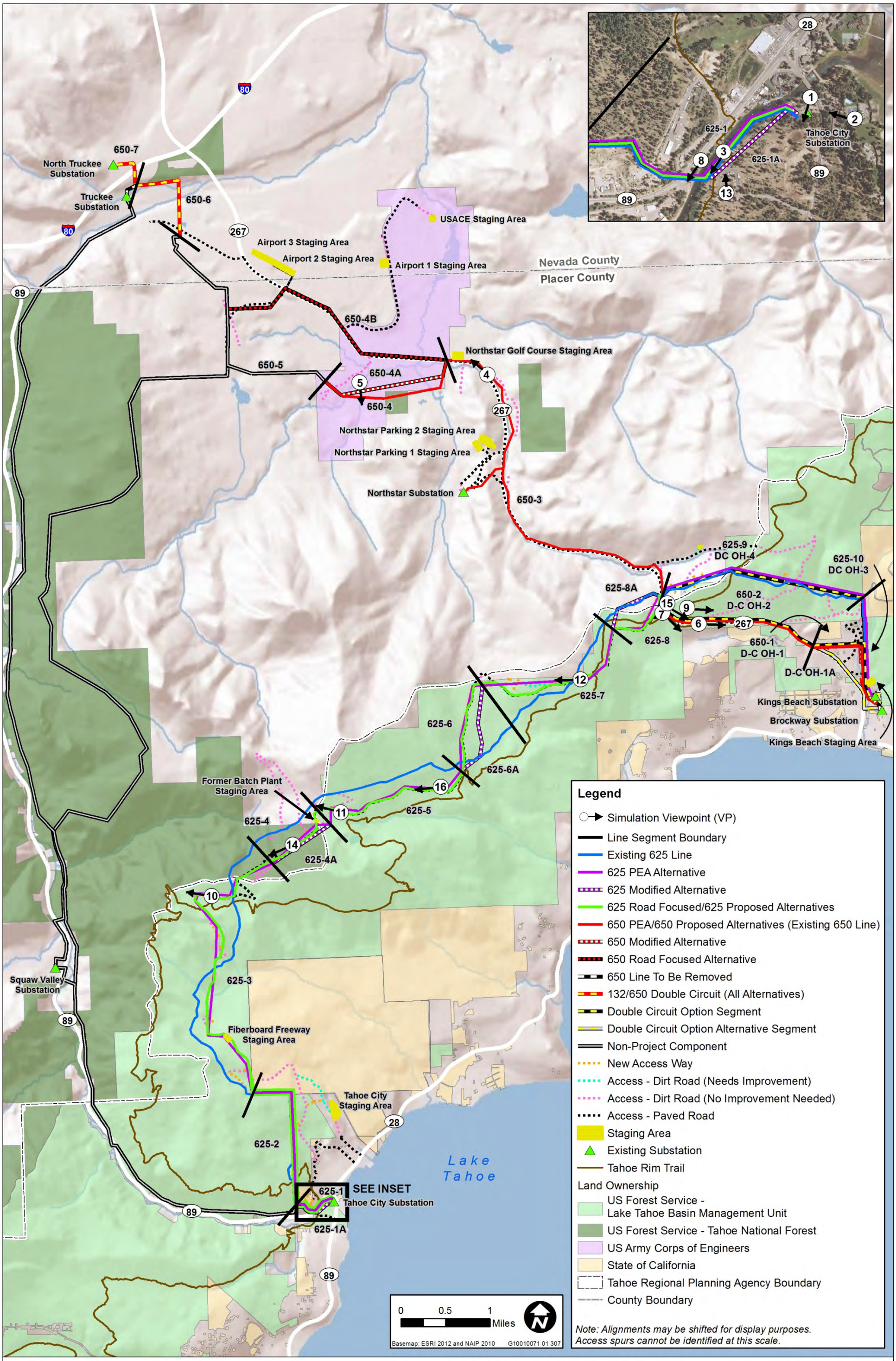
Table 4.4-2 Matrix for Determining Scenic Impact Significance/Intensity

Visual Contrast / Visual Change	Visual Sensitivity			
	High	Moderate	Low	None / Seldom Seen
Low	Potentially Significant / Moderate	Less than Significant / Minor	Less than Significant / Minor	Less than Significant / Negligible
Moderate	Significant / Major	Potentially Significant / Moderate	Less than Significant / Minor	Less than Significant / Negligible
High	Significant / Major	Significant / Moderate	Potentially Significant / Moderate	Less than Significant / Minor

Note: Scenic impact levels are provided for both CEQA (significant/less than significant) and NEPA (negligible, minor, moderate and major). The significance and intensity of impacts are judged from a static or linear key viewpoint, and may be modified based on site-specific circumstances including context and duration (both of which are required considerations under NEPA).

In addition, Applicant Proposed Measures (APMs) are incorporated into the project to minimize impacts to scenic resources. Impact conclusions are determined considering the attenuating effect of the following APMs.

- **APM SCE-1:** The following measures will be implemented during construction:
  - Construction activities will be kept as clean and inconspicuous as practical.
  - Construction storage and staging will be screened, where practical, with opaque fencing from close-range residential views and public viewing areas.
  - Slash treatment within the immediate foreground (50 feet) will be by lop and scatter.
  - If hand-piling and burning is utilized, piles will be located away from the edge of the roadway. Piles will be constructed to minimize residual unburnable material (resulting from pile compaction and/or high dirt content) and damage to remaining trees. Pile burning will be accomplished the following fall or spring, when possible. Pile burning will be planned and implemented to minimize scorching of existing non-fire-killed vegetation.
  - When "cut-tree" marks are utilized, marks will be placed on back sides of trees or away from views of the travelling public.
  - Within the immediate to middle-distance foreground (300 feet), log skidding trails will be re-graded, to the degree possible, back to their original, natural contour and rehabilitated with vegetation.
  - Non-affected timber and ground vegetation will be protected during harvesting and slash treatment.
  - Trees and vegetation within the “clear zone” that do not pose a risk to power lines will be preserved.
  - Visual diversity of the ground surface will be maintained through irregular scatter of limbs, seeding, and other means as practicable.
  - Barriers/boulders/downed logs will be placed in strategic locations to discourage the establishment of user-created trails.
  - Cut stumps will be 6-inch maximum height measured from the uphill side.



Source: Data adapted by Ascent Environmental 2013

Exhibit 4.4-7 **Photo Simulation Viewpoint Locations**

- **APM SCE-2:** Self-weathering dark brown steel poles (CorTen), or equivalent, will be used for the power lines to reduce potential visual contrast.
- **APM SCE-3:** Non-specular conductors will be used for the power lines to reduce the potential for new sources of glare. Non-specular conductor has been either mechanically or chemically treated to reduce reflectivity and has a smooth matte finish which blends more naturally with the environment.
- **APM SCE-4:** A non-reflective finish will be used for substation equipment at all substations to reduce the potential for new sources of glare.
- **APM SCE-5:** Screening through landscaping and non-vegetative means will be installed at the Tahoe City Substation to the degree that the rebuilt substation will not be obvious to the casual observer, and will account for public views of the substation from all sides. Plant material will be appropriate to the local landscape setting and will be consistent with CalPeco's technical requirements for landscaping in proximity to substation and transmission facilities. More specifically, the following will be implemented:
  - With the property owner's permission, native conifer trees will be planted outside of the perimeter fence along the southwest and southeast sides of the substation site. Tree planting will replace existing trees that will be removed and will provide additional screening and landscape backdrop with respect to views from SR 89.
  - With the property owner's permission, on the southeast side of the substation, a mixture of trees and tall shrubs will be planted along the recreational trail adjacent to SR 89 to provide additional screening.
  - With the property owner's permission, at the western corner of the substation site, a mixture of shrubs will be planted outside of the perimeter fence in order to screen views from the recreation trail.
- **APM SCE-6:** Poles proposed in the vicinity of the highly visible clearing adjacent to Mount Watson Road will be placed so as to span the clearing or otherwise minimize their visibility from the Fiberboard Freeway.
- **APM SCE-7:** In cases where replacement poles for the 650 Line are adjacent to SR 267 and will be visible in unobstructed foreground public views from the roadway, poles will be carefully sited to eliminate or substantially reduce their visibility from the highway within the Tahoe Basin as compared to the existing 650 Line without causing new visual impacts from tree removal or construction of access ways that would be required to erect and maintain the line. Any revised alignment or pole placement will be reviewed and approved by applicable land owners, agencies, and utilities.
- **APM SCE-8:** In cases where replacement poles for the 625 Line are adjacent to the Truckee River and would be visible in unobstructed foreground public views along the river or adjacent trails, poles will be carefully sited to minimize their visibility. The westernmost pole on the south bank of the Truckee River where the power line crosses the river will be placed far enough from the river so as to be substantially unseen from the pedestrian bridge. The remaining poles along the south bank of the river will be located southward, outside the river corridor and behind the trees that line the riverbank such that visibility of the power line is minimized as viewed from SR 89, the Truckee River, and the pedestrian bridge. Any revised alignment or pole placement will be reviewed and approved by applicable land owners, agencies, and utilities.
- **APM SCE-9:** In consultation with the USFS and to reduce potential project visibility, selective, site-specific conifer tree planting will be considered in limited areas along the new 625 Line route where relatively unobstructed foreground views of new structures are seen from Mount Watson Road. Placement of new trees will not conflict with project operations or safety requirements.

ALTERNATIVE 1 - PEA ALTERNATIVE

DIRECT AND INDIRECT IMPACTS

IMPACT 4.4-1 (Alt.1)	**Cause inconsistency with adopted plans.** The Tahoe City Community Plan (1994) suggests relocation of the Tahoe City Substation to a specific site known as "the Chimneys" as a means of removing it from public view and thereby improving scenic quality. This action is also defined as Scenic Program Project #135 in the SQIP. Alternative 1 (PEA Alternative) proposes to rebuild the Tahoe City Substation in its current location and screen the facility from public view. The Roadway Travel Unit was not in attainment of scenic thresholds at the time substation relocation was recommended and it is now in attainment and has been since 2006. Because the Roadway Travel Unit is currently in attainment of scenic thresholds, the project would not result in substantially greater visibility of the Tahoe City Substation, and because the recommended relocation to a specific site (which is no longer available) was encouraged and not mandatory to achieve scenic objectives, the rebuild of the Tahoe City Substation on its existing site would not be inconsistent with the Tahoe City Community Plan or SQIP. This impact would be **less than significant**.

To achieve the project's intended operating capability, it is necessary to rebuild the Tahoe City electrical substation as part of the proposed project. The substation is situated in its original location just west of SR 89 and south of the Truckee River in Tahoe City, behind the Bridgetender Tavern and Grill. The substation is in view from SR 89 and nearby public use areas, including the adjacent portion of the 64-Acre Recreation Site, bike trails, picnic tables, and Fanny Bridge, but is partially screened from view by trees and buildings.

Exhibit 4.4-8 shows the Tahoe City Substation as viewed from SR 89 looking south. Exhibit 4.4-9 shows the Tahoe City Substation as viewed from SR 89 near the Gatekeeper's Museum property (which is behind the viewer), looking west. In both simulations, the new substation retains similar form and lines characteristic of an industrial site, but with a different finish and layout. The vertical lines are slightly higher and the forms slightly wider and more discernible, but spatial extent of the transformers appears concentrated within a smaller portion of the view. The texture and color contrast remains similar to slightly greater than the existing structures. Note that these images do not show proposed screening that would be installed in conjunction with the Tahoe City Substation rebuild. In the first viewpoint (Exhibit 4.4-8), fewer structures are visible behind the Bridgetender, and the tree removal associated with the Tahoe City Substation upgrade opens up the view to include trees in the middleground and a greater portion of the sky. The scenic quality of the first view is improved because less of the Tahoe City Substation is apparent, and the tree removal introduces a greater degree of variety and depth into the scene. The visual effect from the second viewpoint (Exhibit 4.4-8) is similar to the first, except that the tree removal renders the Tahoe City Substation site more conspicuous. However, the increase in exposure is balanced by the positive effect of opening up views of middleground views and mountainous horizon line.

As compared to the existing Tahoe City Substation, the rebuilt substation would introduce a moderate degree of visual change. As discussed in the setting, these views have low to moderate sensitivity because they would be briefly experienced by high numbers of motorists and pedestrians.

The 1994 Tahoe City Community Plan recommends the substation be relocated to an area known as the Chimneys (which has since been developed) where it would be unseen by the public. Subsequently, TRPA's 2001 EIP, which contains the SQIP, identified Scenic Program Project #135 which similarly called for relocating the substation to the Chimneys area. In both cases, the goal was to improve scenic quality by removing the substation from public view. It should be noted that the specific roadway travel unit (Roadway Travel Unit 14 – Tahoe Tavern) was out of attainment of scenic threshold standards at the time the substation relocation project was recommended in the Tahoe City Community Plan (1994) and included in the EIP (2001). The unit came into attainment in 2006 and has remained in attainment (TRPA 2007 and TRPA 2011).

Existing View

Simulated View

Source: Environmental Vision 2012

Exhibit 4.4-8 Tahoe City Substation, VP 1, All Action Alternatives

Existing View

Simulated View

Source: Power 2012

Exhibit 4.4-9 Tahoe City Substation, VP 2, All Action Alternatives

Alternative 1 (PEA Alternative) proposes to rebuild the substation in its original location. Rebuilding the substation at its current location would be inconsistent with the 1994 Tahoe City Community Plan recommendation and SQIP Scenic Program Project #135 to relocate the facility if the rebuilt substation would be in public view. In addition, the TRPA regulations prohibit any decrease in the travel route rating as seen from roadway travel units. Because the rebuilt Tahoe City Substation would increase in mass and height, with color and texture contrasts that conflict with the surrounding environment, it could, without screening, adversely affect the travel route rating associated with the roadway travel unit.

The goal of eliminating or minimizing views of the Tahoe City Substation from public use areas expressed in the Tahoe City Community Plan and by Scenic Program Project #135 of the SQIP can be accomplished without relocating the substation through sufficient screening of appropriate types and placement. APM SCE-4 specifies use of a non-reflective finish on substation structures to reduce the potential for new sources of glare. In addition, APM SCE-5 describes screening (both through landscape and non-vegetative methods) that the applicant has integrated into project design, which will include native conifer trees and native shrubs to be planted outside of the perimeter fence along the southwest and southeast sides of the rebuilt Tahoe City Substation site, such that the presence of the substation would not be obvious to the casual observer. Tree planting would provide additional screening and landscape backdrop with respect to views from SR 89 and nearby public use areas. With the permission of the owner of the property on the southeast side of the rebuilt Tahoe City Substation, a mixture of trees and tall shrubs will be planted along the recreational trail adjacent to SR 89. The placement of trees to screen the project from view would preclude any decrease in the travel route rating and would result in improved aesthetic conditions.

The APMs that have been integrated into the project design would be sufficient to reduce visual impacts associated with the rebuilt Tahoe City Substation and would render the suggestion to move the substation unnecessary. Because Roadway Travel Unit 14 – Tahoe Tavern has been in attainment since 2006, the site to which the recommended relocation of the substation was to occur has since been developed, the visual change would be minor to moderate (see Table 4.4-2, Matrix for Determining Scenic Impact Significance/Intensity, for the guidelines used to evaluate the scenic effects of the project), and sufficient screening will be implemented to minimize visibility of the rebuilt substation, impacts associated with potential inconsistency with adopted plans described above would be **less than significant.** APMs would achieve the same objective as the plans for minimizing public views of the facility.

Mitigation Measures

No mitigation measures are required.

IMPACT 4.4-2 (Alt.1)	**Create views of rebuilt power lines or other project components from sensitive locations.** The existing 625 and 650 Lines would be rebuilt in the alignment and configuration proposed under Alternative 1 (PEA Alternative) using larger poles that would be more conspicuous than the existing line in views from certain public recreation areas, bike trails, and scenic roadway corridors. Increased visibility of the rebuilt lines could fail to meet management targets for scenic quality established by lead agencies. However, because implementation of proposed APMs would minimize scenic effects during construction through specific screening and management practices; require use of specific materials, colors, and textures for project elements; and modify power pole and line placement such that views from sensitive locations and scenic resources are eliminated or minimized, potential scenic impacts would be reduced to **less-than-significant** levels.

MIDDLEGROUND/BACKGROUND DISTANCES

As described in the setting and shown in Exhibit 4.4-4, the existing poles are minimally visible in the middleground and background views. When viewed at greater distances within the larger landscape context, the poles visually blend with the surrounding trees in terms of line, form, and color. With the proposed project, vantage points within the middleground distance zone (i.e., 0.5 to 4 miles from the proposed project) would require a very specific set of circumstances to occur for the proposed project to be visible. The project would only be visible to observers within middleground/background distances if: 1) the immediate foreground is clear of obstructions (e.g., a meadow or field), 2) the line of sight is otherwise uninterrupted, and 3) the power line ROW is aligned in the same direction as the viewer's line of sight. In these circumstances, the color/texture contrast in the landscape caused by vegetation clearing would be more noticeable than the poles and the conductors themselves, particularly during the winter. While these viewing conditions are rare and would occur only briefly along a travel route, it is possible that portions of Alternative 1 (PEA Alternative) would be visible from distant locations such as portions of the Tahoe Rim Trail farther removed from the proposed power lines. In addition, public roadways crossing Martis Valley would provide middleground and background views of the rebuilt 650 Line.

However, the incremental visual change caused by Alternative 1 (PEA Alternative) would be very limited from middleground/background distance zones because: 1) such views would not be available from many locations, and if visible, the duration of visibility would be brief; 2) the greater distance reduces the apparent size/dominance of the action; 3) vegetation clearings would be generally coincident with existing ROWs in the landscape; and 4) the visual context would attract viewer attention toward other, more attractive landscape features. The degree of apparent visual change would be low. The impact of Alternative 1 (PEA Alternative) from middleground/background distances would be **less than significant** (see Table 4.4-2, Matrix for Determining Scenic Impact Significance/Intensity, for the guidelines used to evaluate the scenic effects of the project).

VISUAL EFFECTS SPECIFIC TO THE CONSTRUCTION PHASE

Visual disturbances associated with construction activity would include the presence of vehicles, heavy equipment, and workers. Site preparation and grading during the initial construction phase would also cause visual disturbance through the removal of existing vegetation and the creation of a visual contrast with the surrounding area. Multiple staging areas would be required in order to store, stage, and distribute construction equipment and materials as part of project implementation. However, the staging areas would primarily be located in areas that have been previously disturbed, thereby minimizing the degree of long-term visual change that would occur as a result of site preparation of the staging areas. In addition, the visual impacts of staging areas and use of temporary ROWs for construction activity along the 625/650 Line would be temporary. Overall, the construction phase is expected to take approximately 14 months within a five-year construction period; however, construction activity at any one place along the 625/650 Line would be substantially shorter in duration. As specific segments of Alternative 1 (PEA Alternative) are completed, construction activities and staging areas would move to the next segment or location. The annual construction season in the Lake Tahoe Region is from May 1 through October 15, and may be extended with TRPA approval. The construction season outside the Lake Tahoe Basin is generally the same, weather permitting. Work crews and equipment would be visible to the public during logging, removal of other vegetation, and grading of new access ways. They would also be visible in the area when installing the new poles and stringing the lines.

A total of 12 sites for use as staging areas have been identified, which would vary in size from 0.2 acre to 9.1 acres. The staging areas are common to all project alternatives. Temporary chain-link fencing would be installed around the perimeter of the staging areas. Staging areas would be used during construction of the project and then removed. Only one of the 12 staging areas, referred to as the Northstar Golf Course, would be in public view from a heavily used sensitive location. It is located off the east side of SR 267 just north of where SR 267 passes the Northstar Golf Course, and is accessed by a dirt road located approximately 1.4 miles southeast of Martis Creek Road. It would be visible to the public from SR 267. Several other proposed staging areas, such as the Old Batch Plant, the Fiberboard Freeway, the Northstar parking lot, USACE staging area, and the Truckee

Tahoe Airport staging areas, would be visible from public travel routes. Except for the Truckee Tahoe Airport and USACE staging areas, views of these facilities would be limited to the immediate area because of the surrounding forest cover. The other staging areas would be in locations that would not be visible from major roads, trails, or other sensitive areas because of the screening effect of the forest. None of the proposed staging areas would be located on or near the Tahoe Rim Trail.

Staging areas that would be visible to motorists or cyclists along paved or unpaved routes, including SR 267 and the Fiberboard Freeway, would only be visible briefly (i.e., a matter of seconds) along the route, and would not substantially affect the quality of the scenic or recreational experience. Because the proposed staging areas are already disturbed and do not appear in their pristine natural condition, the sensitivity to visual change would be low and the visual impact incremental in nature. Nevertheless, during the construction phase, staging areas would have the appearance of a construction site, and could have substantial, albeit brief, visual effects as roadway users pass the site. In accordance with APM SCE-1, the applicant has committed to keeping construction activities as clean and inconspicuous as possible. In addition, APM SCE-1 will require construction storage and staging to be screened with opaque fencing from close-range residential views and public viewing areas, where practical. With incorporation of these measures into project design, the effect of staging areas on scenic resources would be minimized by substantially reducing the intensity of visual effects. The visual effects of vegetation clearing and limited tree removal necessary to prepare certain staging areas for use would have localized, long-lasting visual impacts by increasing the level of visual contrast that currently exists in the landscape. However, as described, the effect would be attenuated through APM SCE-1, minor in intensity, and would be visible only briefly as users of the Fiberboard Freeway and SR 267 pass the staging areas. Finally, the presence of work crews and equipment along the ROW necessary to log trees, remove other vegetation, grade new access ways, and to replace and relocate poles and conductors would be visually distracting, but temporary.

LONG-TERM EFFECTS FROM SENSITIVE LOCATIONS

Long-term impacts are assessed using the key viewpoints identified as representative of the visual experience for a large number of public viewers and from sensitive and/or high-quality viewing locations (such as scenic highways). Existing visual conditions are described in Section 4.4.2, Existing Conditions/Affected Environment, and this discussion describes the magnitude and severity of visual changes that would occur so as to assess the significance and intensity of the impact in accordance with Table 4.4-2, Matrix for Determining Scenic Impact Significance/Intensity. It also addresses, for applicable viewpoints, whether features of Alternative 1 (PEA Alternative) would meet applicable USFS VQOs or result in a reduction in TRPA scenic threshold ratings.

Truckee River and SR 89

Under Alternative 1 (PEA Alternative), Segment 625-1 of the 625 Line would be replaced in its existing alignment, extending along the south bank of the Truckee River from the Tahoe City Substation before crossing the river and SR 89. The existing line within the river corridor is visible from the river itself and from the Truckee River Bike Trail. Exhibit 4.4-10 presents a southwesterly (downstream) view of the Truckee River from the pedestrian and cyclist overpass across the river. From this viewpoint, the new power line pole appears substantially wider and protrudes higher above the horizon line than the existing pole and surrounding trees. In this view, the scale and dominance of the proposed 625 Line is out of character with existing visual features, as compared to the existing pole which is more compatible with the surroundings and visual environment. Although the proposed pole would replace the existing pole in the same location, the incremental increase in width and height is sufficient in magnitude to be noticeable and potentially negatively perceived by a casual observer. While users of the overpass would only briefly be exposed to the view, the pole in the viewpoint and additional replacement poles along the south side of the Truckee River would also be visible to pedestrians along SR 89, rafters on the Truckee River, and to some users of the 64-Acre Recreation Site. Because the volume of visitors and recreationists would be high and because SR 89 is designated by TRPA as a scenic highway (Roadway Travel Unit 42 – Outlet to Lower Truckee River) in non-attainment of the scenic threshold standard, the visual sensitivity of the viewpoint is high. The power line upgrade along Segment 625-1 in the location of the existing line along the river could result in an adverse scenic effect and a decrease in the travel route rating of Roadway Travel Unit 42.

Existing View

Simulated View

Source: Sierra Pacific 2010

Exhibit 4.4-10 Truckee River Corridor, VP 3, Alts.1, 3, 4, Segment 625-1

APM SCE-8 would require carefully siting replacement poles along the 625 Line to minimize their visibility from the Truckee River and the adjacent 64-Acre Recreation Site. In cases where replacement poles for the 625 Line would be adjacent to the Truckee River and would be visible in the public's unobstructed foreground views along the river or adjacent bike trails, poles will be carefully sited to minimize their visibility. The photo simulation of the location at which the 625 Line crosses SR 89, the bike trail, and Truckee River as seen from the highway and bike trail (Exhibit 4.4-15) shows that incorporation of this measure into project design would be effective in reducing views of the line from this particular viewpoint. Conversely, the photo simulation of the view of the river corridor from the pedestrian and bike trail bridge over the Truckee River (Exhibit 4.4-10) illustrates that, unless continued careful siting occurs for all the poles along the Truckee River to the Tahoe City Substation, the rebuilt line would be substantially more conspicuous within the river corridor.

Implementation of APM SCE-8 would locate the new power line behind the existing line of trees on the south bank of the Truckee River, outside the river corridor such that visibility of the power line is minimized as viewed from SR 89, the Truckee River, and the pedestrian bridge. (Note: with this APM, the alignment of the 625 Line in Segment 625-1would be the same as Alternative 2 [Modified Alternative], assessed below.) As detailed in APM SCE-8, the westernmost pole on the south bank of the Truckee River where the power line crosses the river will be placed far enough from the river so as to be substantially unseen from the pedestrian bridge. This measure would enhance the view for a large number of sensitive viewers by removing the existing line along the river's edge, and placing the new line out of direct view from SR 89, Truckee River, Truckee River Bike Trail (on the north side of the river), and the pedestrian bridge. The more southerly location would not avoid adverse impacts altogether, however. This alignment would parallel a paved path used by cyclists, pedestrians, and through-hikers on the Tahoe Rim Trail and would cross the access way to the bicycle/pedestrian bridge that crosses the river and raft launch site immediately east of the bridge. In the context of a recreational area with a mix of natural (trees, river) and urban (roadways, bridges, structures, parking areas) features, this alignment introduces a strong degree of visual change in the immediate vicinity.

APM SCE-8 will improve existing views from SR 89 and its associated TRPA travel route rating by moving the power line from the view corridor of the scenic highway to behind the line of trees on the south bank of the Truckee River. This would render the line visible to users of the 64-Acre Recreation Site, and when viewed in the immediate foreground the new poles would be visually dominant features. When viewed at greater distances within the larger landscape context, however, the poles would visually blend with the surrounding trees in terms of line, form, and color. APM SCE 8 would result in an overall decrease in the number of affected viewers and would avoid impacts to the scenic highway corridor, Truckee River, and Truckee River Bike Trail on the north side of the river. Because this measure would reduce the amount of man-made structure visible from TRPA Roadway Travel Unit 42 (SR 89), the impact would be less than significant (i.e., the composite score would not decrease) and may be beneficial (i.e., the composite score may increase).

SR 267

Segments 650-2 and 650-3 of the 650 Line are routed along the east side of SR 267 for about 6 miles from approximately 750 feet north of Stewart Way in Kings Beach northward over Brockway Summit and continuing on to Martis Valley where the line crosses SR 267 and heads westward away from the highway. The existing line is clearly visible along most of the route on the side of the road within these two segments. Segment 650-2 is within TRPA Roadway Travel Unit 41 – Brockway Summit. This Roadway Travel Unit is in attainment of scenic threshold standards; however, should the project result in a decrease in threshold ratings to a level below that inventoried and documented in 1982, the impact would be considered significant with respect to TRPA thresholds. Segment 650-3 is outside the Tahoe Basin and therefore not within a TRPA Roadway Travel Unit. However, this portion of SR 267 is identified as a scenic corridor in the Placer County General Plan.

The existing 625 and 650 Lines are on poles that average 52 feet in height. New poles that would be used to rebuild the lines would be steel instead of wood. They would be, on average, approximately 7 to 12 feet taller than the existing wood poles, a height increase of between 13 and 23 percent, and would have a dark brown,

rust-like color. Most of the new poles would be 15 to 19 inches in diameter at the base, which is 2 to 3 inches larger than the existing wood poles. Some new poles would be self-supporting and would be secured to a poured concrete foundation. The foundations would have diameters of 3 to 6 feet that would normally extend 6 to 12 inches above the ground surface but could extend as high as 2 feet. Self-supporting poles could have diameters of up to 4.5 feet at the base. In various locations, the existing poles not only support the power line but also electrical distribution and communication lines. (See Exhibit 3-6, Locations of Existing Distribution and Communication Underbuild, in Chapter 3, Project Alternatives). Under Alternative 1 (PEA Alternative), all lines on existing poles, including distribution and communication underbuild, would be transferred to the new, larger poles and the existing poles would be removed, with the exception of a small portion of Segment 650-7 in the Town of Truckee between the Truckee Substation and the 132/650 double-circuit (see Exhibit 3-7).

Martis Valley

Along Segment 650-3 outside the Tahoe Basin, the larger poles would be more conspicuous than the existing poles, but would otherwise have a similar appearance and character. They would not substantially disrupt views from the highway as compared to the existing 650 Line. Exhibit 4.4-11 provides an example of how the new line would appear in the context of the Martis Valley, looking northwest from SR 267 near the Northstar Golf Course. The height and diameter of the poles are noticeably greater, and extend to a greater height above the horizon line. However, in the viewing context of an open plain, with wide panoramic views readily available, the new poles along the north end of Line Segment 650-3 and along Line Segment 650-4 represent a minor to moderate incremental change, as compared to existing conditions.

In all cases the new line would utilize non-specular conductors (see APM SCE-2) and self-weathering, dark brown poles, or equivalent (see APM SCE-3) which would be less conspicuous than the existing conductors and poles. From SR 267, the 650 Line diverges from the highway and extends west across Martis Valley. Segment 650-4 in this area is about 1,050 feet south of Martis Creek. A public trail leads from a gravel parking area off of SR 267. The trail generally follows the creek in this area, on its north side. The existing line is visible to the south from the trail. Exhibit 4.4-12 shows the effect of increased distance of Segment 650-4 from public roads on the degree of apparent visual change. In this exhibit, the difference between the existing power line and the proposed power line is nearly indiscernible, primarily because the greater distance of the line from the road decreases its prominence, and decreases its potential to protrude above the horizon line.

For viewpoints from within or toward the Martis Valley, the degree of visual change associated with the upgrade of the 650 Line would be low and the visual sensitivity would be moderate. As such, the visual impact would be less than significant (see Table 4.4-2, Matrix for Determining Scenic Impact Significance/Intensity, for the guidelines used to evaluate the scenic effects of the project). A small parcel of land within Martis Valley, immediately east of the Northstar Golf Course and 0.5-mile south of SR 267 is administered by the USFS and has a VQO of Retention, which requires that management activities repeat the form, line, color, and texture frequently found in the characteristic landscape. The new power line would repeat visual elements of form and line of the existing power line, but would differ only slightly in color and texture. However, as seen from SR 267 (Viewpoint 5), Segment 650-4 would remain consistent with the Retention VQO because the visual changes would not be apparent for travelers on the roadway.

Brockway Summit to Kings Beach

The larger power line poles would be more conspicuous than the existing poles, as described above. Inside the Tahoe Basin, they would be visible in Segments 625-1 and 650-2 from TRPA Roadway Travel Units, public bike trails, and the SR 267 scenic corridor. In Alternative 1 (PEA Alternative), the section of SR 267 that descends into the Tahoe Basin from Brockway Summit is a particularly sensitive view corridor, as it affords travelers views of Lake Tahoe and the surrounding landscape. It also serves as a potential gateway to Lake Tahoe and offers a first impression for visitors to the region.

Existing View

Simulated View

Simulated View Source: Sierra Pacific 2010

Exhibit 4.4-11 SR 267, VP 4, All Action Alternatives, Segment 650-3

Existing View

Simulated View

Source: Sierra Pacific 2010

Exhibit 4.4-12 Martis Creek Trail, VP 5, Alts.1, 4, Segment 650-4

The existing 650 Line is located on the eastern and northern side of the road, whereas the views of Lake Tahoe are in primarily in the southerly direction. The existing power poles, which skyline in certain areas, can detract from the viewing experience. The new poles, which would be thicker and taller, have the potential to exacerbate this visual effect and could result in a decrease in the travel route rating for Roadway Travel Unit 41, which would violate the adopted Scenic Quality Threshold Ratings. This is because the presence of manmade features is one of the scoring factors used in the composite score, and Segment 650-2 would be more conspicuous to travelers on SR 267 because of the increased height and width of the poles.

Potential impacts to the scenic quality rating of Roadway Travel Unit 41 due to the increased presence of power poles would be avoided or minimized through implementation of APM SCE-7, which states that replacement poles for the 650 Line will be sited to eliminate or substantially reduce their visibility from the highway within the Tahoe Basin from Brockway Summit southward, as compared to the existing 650 Line, without causing new visual impacts from tree removal or construction of access ways that would be required to erect and maintain the line. In this area, the 650 Line would be moved eastward, away from SR 267, so as to be among the fringe of trees east of the highway (see Exhibit 4.4-24 650 Setback Alignment of APM SCE-7). This would result in beneficial scenic effects by further opening up views of the Tahoe Basin for travelers on SR 267. The realigned portion of the 650 Line would be unseen or minimally visible from the highway. As shown in Exhibit 4.4-13, Segment 650-2 would, from this viewpoint, be moved behind the line of trees such that it would be wholly hidden from view, or nearly so. Exhibit 4.4-14, in contrast, depicts the existing and post-project view of a portion of Segment 650-2 if the new power line is not set farther back; it would not be hidden behind the tree line and would result in greater visibility of man-made structure in the roadway travel unit.

Because implementation of APM SCE-7 would set the reconstructed power line back from SR 267 and among the trees, it would result in additional impacts of the same types described for other wooded portions of the project area (e.g., along the Fiberboard Freeway). Construction of the line in this reach would have greater ease of access than a mid-forest location by virtue of its alignment along SR 267, but construction would require tree removal, vegetation removal, clearing of rocks and boulders, and surface disturbance for creation of access ways. Impacts typical of such construction include emissions from construction vehicles (which would be required in any case), generation of fugitive dust in the vicinity of grading and surface disturbance, release of otherwise stored carbon dioxide (CO_2, a greenhouse gas), temporary staging and stockpiling, and noise from vehicles and heavy equipment in areas proximate to active construction. Construction and operational activities that would occur in the setback area would be the same as those that would occur in other, similar portions of the project area, and would be subject to all of the APMs to which the applicant has committed to reduce impacts to scenic resources, air quality, biological resources, cultural resources, soils, hazards and hazardous materials, water quality, noise, recreation, utilities, and transportation. The expanded ROW needed for implementation of APM SCE-7 was surveyed for both cultural resources and biological resources, and no sensitive resources or resources of concern were found.

Construction of the power line along SR 267 without APM SCE-7 would result in permanent and temporary impacts to forest land, including tree removal, release of CO_2, and loss of CO_2 sequestration potential. Implementation of the revised, or setback, alignment of APM SCE-7 would result in additional tree removal and associated effects. To quantify the increase in impacts to forestry resources, the acreage of forest land within the revised alignment was calculated and compared with the acreage of forest land within the relevant portions of the alignments analyzed in Section 4.3, Forestry Resources, of this EIS/EIS/EIR. Forest land acreage calculations for the revised alignment were conducted using the same data sets used in the analysis presented in Section 4.3, Forestry Resources. To quantify impacts associated with different forest land variables (e.g., number of trees, total cubic foot volume, total merchantable volume), the average per-acre value of each variable was calculated, by segment, using the segment analysis data included in Appendix H, Supplemental Forestry and Vegetation Management Report. These per-acre values were then multiplied by the affected forest land acreage. Impacts associated with carbon sequestration were derived using the calculated tree volume totals and

Existing View

Simulated View

Source: Sierra Pacific 2010

Exhibit 4.4-13 SR 267, VP 6, Alts.1, 4, Segment 650-2

Existing View

Simulated View

Source: Sierra Pacific 2010

Exhibit 4.4-14 SR 267, VP 7, Alts. 1, 4, Segment 650-2

Existing View

Simulated View

Source: Sierra Pacific 2010

Exhibit 4.4-15 SR 89, VP 8, All Action Alternatives, Segment 625-1

the methods and formulas presented in Section 4.3, Forestry Resources. Implementation of APM SCE-7 would result in approximately 7.2 additional acres of forest land impacts and removal of approximately 1,600 additional trees greater than 1-inch in diameter at breast height (dbh). These and related tree removal effects are shown in Table 4.4-3. Because of its long-term effect and degree of physical change to the landscape, tree removal would be the most pronounced effect of APM SCE-7 implementation. Under Alternative 1 (PEA Alternative), the power line along SR 267 would be the single-circuit 650 Line, requiring a temporary 65-foot ROW for construction and a 40-foot permanent ROW. All disturbances outside of the permanent 40-foot wide ROW required for operation would be restored to their original condition following construction.

Implementation of APM SCE-7 for Alternative 1 (PEA Alternative) would increase the acreage of permanent impacts to forest land, and would result in a 2.8 percent increase is the number and volume of trees that would be removed to accommodate construction of the alternative. These impacts would not substantially reduce the size, continuity, or integrity of the forest land in the area or interrupt the view from sensitive locations and scenic resources.

Table 4.4-3 Forest Land* Impact Comparison for APM SCE-7 for Alternative 1 (PEA Alternative)

Impact Variable	Impact without Implementation of APM SCE-7	Impact with Implementation of APM SCE-7	Change in Forest Land Impact from Implementation of SCE-7	
			Difference	Percentage
Permanent Forest Land Impacts (Acres)	129.1	136.3	+7.2	5.6%
Temporary Forest Land Impacts (Acres)	97.9	97.9	N/C	0%
Total Number of Trees ≥1" dbh to be Removed (Permanent and Temporary Impact Areas)	58,000	59,601	+1,601	2.8%
Total Cubic Foot Volume of Trees ≥1" dbh to be Removed	863,600	839,421	+24,179	2.8%
Total Merchantable Timber Volume in Cubic Feet (Conifers ≥9" dbh)	594,065	577,269	+16,796	2.8%
Total $MTCO_2e$ Released	8,128	8,366	+238	2.9%
Lost $MTCO_2e$ Sequestration Potential	8,913	9,502	+589	6.6%
$MTCO_2e$ Sequestered Over Time in Temporary Impact Areas	14,303	14,303	N/C	0%

* Forest Land, as described in Section 4.3, Forestry Resources, is defined as land that can support 10 percent native tree cover of any species that allows for management of timber, aesthetics, fish and wildlife, recreation, and other public benefits.

Exhibit 4.4-16 depicts a view of Segment 650-2 from a trailhead for the Tahoe Rim Trail a short distance east of SR 267. From this location, two existing poles would be removed from view and replaced with a new pole would that would be taller and thicker than the existing poles. However, from this important viewpoint, the new pole would appear similar in size and scale because it would be placed at a greater distance from the trailhead.

Existing View

Simulated View

Source: Sierra Pacific 2010

Exhibit 4.4-16 Tahoe Rim Trailhead, VP 9, Alts.1, 4, Segment 625-9

Implementation of APM SCE-7 would prevent adverse scenic impacts from increased visual exposure of the power lines from sensitive locations because the rebuilt power lines would be less conspicuous than the existing lines. By reducing the amount of manmade features that would be in view from TRPA Roadway Travel Units, the potential for reductions in adopted TRPA Scenic Threshold Ratings would not only be avoided, the composite score of the Roadway Travel Unit would improve, resulting in a beneficial scenic effect. In addition, the USFS VQO for these locations is Retention, which requires that management activities repeat the form, line, color, and texture frequently found in the characteristic landscape. For these portions of the alignment, incorporation of APM SCE-7 into the project design would be effective in decreasing the degree of visual change to a low level. Given the high sensitivity of the location but low level of visual change, the impact on scenic resources would be **less than significant** (see Table 4.4-2, Matrix for Determining Scenic Impact Significance/Intensity, for the guidelines used to evaluate the scenic effects of the project).

Mitigation Measures

No mitigation measures are required.

IMPACT 4.4-3 (Alt.1)	**Compliance with USFS Visual Quality Objectives.** Under Alternative 1 (PEA Alternative), the 625 Line would be constructed within a new alignment on NFS lands within a new ROW and these areas would require new access. The visual effect of the new cleared ROW, new access ways, and rebuilt power line would meet management goals for visual quality on NFS lands during construction and operation of the project. This impact would be **less than significant**.

Most of the rebuilt 625 Line in the area between SR 89 and SR 267 would be within a new ROW under Alternative 1 (PEA Alternative) instead of within the existing 625 Line ROW. This would be true of power line Segments 625-3, 625-4, 625-5, 625-6, 625-7, 625-8, and 625-9. This is a forested area largely within the LTBMU, but with a small portion within the Tahoe National Forest. Key observation points include the Tahoe Rim Trail (see Exhibit 4.4-16), the Fiberboard Freeway, and Fire Road 6, which are linear in nature and thus offer viewing opportunities along their length. The Fiberboard Freeway is paved from SR 267 for a distance of about 7 miles to where it becomes a dirt road and continues over very steep terrain toward Tahoe City. The paved road is open to the public and used in all seasons for recreation. It serves as a primary access way for this part of the LTBMU. The route of the existing 625 Line was laid out with the goal of keeping the line out of public view as much as possible. The existing line is visible from only a few spots along these two linear viewpoints including three locations where it crosses the paved portion of the Fiberboard Freeway and two places where it crosses the Tahoe Rim Trail. Otherwise, the existing line is not in close proximity to either of these linear viewpoints. Fire Road 6 is a dirt road within the Tahoe National Forest near Sawtooth Ridge in the area north of the project. The existing 625 Line is minimally visible from this road.

Under Alternative 1 (PEA Alternative), the 625 Line would generally follow the Fiberboard Freeway. It would cross the road at six points and would cross the Tahoe Rim Trail in two locations. The new line would mostly be on the uphill side of the existing road. Poles would generally be placed 75 to 175 feet from the edge of the road but in some places would either be farther away or as close as 10 to 30 feet to the road. The length of segments that would be closest to the road would generally be about 1,200 linear feet or less. Where the line would be farther from the road, trees would be retained between the road and the rebuilt line. The distance between the Fiberboard Freeway and the ROW for the proposed 625 Line varies considerably because the Fiberboard Freeway more closely follows the topography of the landscape whereas the proposed 625 Line alignment contains long, straight segments, which are beneficial from a maintenance and reliability standpoint.

For Segments 625-3, 625-4, 625-5, 625-6, 625-7, 625-8, and 625-9, a new cleared ROW for the line would be created. New access ways and spurs from existing roads (see Chapter 3, Project Alternatives, subsection entitled "Access, Travel Ways, and Roads") would be created to allow construction and long-term maintenance of the

line. Under Alternative 1 (PEA Alternative), a total of approximately 15 miles of new access way within the power line ROW would be constructed and approximately 9.1 miles would be constructed outside the ROW. Also, a total of approximately 1.3 miles of existing roads would be improved to allow trucks to access the project site during construction. A comparison of the lengths of the existing and proposed 625 Line alignments in terms of the VQOs on USFS lands is shown in Table 4.4-4. Most of the proposed 625 Line under Alternative 1 (PEA Alternative) would be in a landscape with a VQO of Partial Retention (about 10.8 miles), and a smaller portion of the line would be in Retention (about 3 miles) and Modification (about 0.4 mile). Compared to the existing alignment, which would be abandoned and allowed to naturally revegetate, Alternative 1 (PEA Alternative) would reduce the length of the 625 Line that would be located in a landscape with a VQO of Retention.

Table 4.4-4 Comparison of VQOs traversed by 625 Line Alternative Alignments

	Visual Quality Objectives (miles of alignment)		
	Retention	Partial Retention	Modification
Existing Alignment	3.15	9.53	0.42
Alternative 1: PEA Alternative	2.95	10.75	0.44
Alternative 2: Modified Alternative	2.55	11.36	0.44
Alternative 3: Road Focused Alternative	1.07	9.64	0.47
Alternative 3A: Road Focused Alternative with Double Circuit Option	1.07	9.64	0.47
Alternative 4: Proposed Alternative	1.07	9.64	0.47

Once constructed, the new line and cleared ROW would be visible from the Fiberboard Freeway in some places but would be partially to completely screened from view in others. Exhibits 4.4-17 and 4.4-18 provide an example of the appearance of the new poles from locations close enough to the Fiberboard Freeway to be visible. Unlike the 650 Line, the 625 Line would be within a new ROW and would not replace existing poles in the same location. The addition of the poles and conductors would result in a minor to moderate visual change in the scene for Viewpoints 10 and 11. The vertical form and lines introduced by the poles would repeat the basic shape of the tree trunks, as typical tree heights exceed the proposed height of the new poles. In addition, non-specular conductors (see APM SCE-2) and self-weathering dark brown poles, or equivalent, (see APM SCE-3) would minimize the color and texture contrasts. However, the horizontal lines and shapes introduced by the conductors and pole cross-arms would be uncharacteristic of the visual elements found in the existing landscape. The visual contrast associated with the new line would be intermittently visible along the Fiberboard Freeway as a user travels along it.

The permanent 40-foot wide vegetation management corridor would require removal of trees that conflict with operation and maintenance of the line, although low-growing vegetation that would not conflict with the line or the associated 10-foot wide access ways would be preserved. During construction, the corridor would be wider—approximately 65 feet to allow for establishment of access ways and construction of the line. The wider, temporary ROW would allow for flexibility in establishing access ways so that they may be constructed in a manner that minimizes the number of trees that would need to be removed and that allows for passage and maneuver of heavy construction equipment necessary to install poles and string conductors. After construction, the ROW would be stabilized with low growing species. Trees would be allowed to colonize within the ROW, but would be trimmed or removed if: 1) they reach a sufficient height/size as to conflict with radial clearance requirements of bare line conductors (18 inches pursuant to CPUC General Order 95), 2) pose a hazard to the line (i.e., dead, dying, diseased, decaying, or bug-infested trees), or 3) encroach on permanent access ways. Because revegetation would be allowed to occur after construction, the visual effect of vegetation clearing would be most severe immediately following construction but would decrease over time.

The effect of vegetation management actions are depicted in the viewpoint simulations. As shown in Exhibit 4.4-17, little change would be visible in existing clearings that contain only grasses and low-growing shrubs. In this

viewpoint, the line is sufficiently distant from the viewer that the effect of vegetation management would not be apparent. Exhibit 4.4-18 shows an example where vegetation clearing would be minimally visible; in this location, some tree removal is noticeable, resulting in a slightly less dense forest canopy and an increase in the amount of visible sky. In both simulations, however, the effect of ROW vegetation management is minimally apparent, and USFS VQOs would be met in both circumstances because the dominant landscape elements would be preserved.

Access ways and spur roads for long term maintenance of the line would be visible where they lead from the Fiberboard Freeway or would otherwise be in close proximity to the road, appearing as corridors where trees are removed but low growing vegetation is present. Exhibit 4.4-19 depicts such an example, which would likely be the most intense visual effect of Alternative 1 (PEA Alternative). In this viewpoint, the position and view direction of the observer renders visible a large portion of the cleared ROW corridor. In these situations (in which the ROW obliquely deviates from the road), travelers on Fiberboard Freeway would briefly be exposed to a linear ROW that does not repeat the basic landscape character elements to which travelers are accustomed. Because the density and height of trees along the new ROW would vary significantly, the permanent 40-foot wide corridor would not appear as a "hard" edge in the landscape; rather natural clearings would serve to roughen/undulate the tree line, and the 10-foot wide access ways, where present, would weave along the ROW, between poles, in a manner that would allow natural screening by low-growing vegetation and trees.

The prominence of the poles and conductors, and the presence of a swath of cleared land, would not be uncharacteristic of the existing landscape. Users of the Fiberboard Freeway would only briefly be exposed to this visual effect, albeit at fairly regular intervals. However, this visual effect is not uncharacteristic of the visual setting as a whole because a similar effect currently exists along the route. Users of the Fiberboard Freeway regularly pass openings in the forest caused by forest roads teeing off the main route, as well as at crossings of the existing 625 Line. As described, the vertical orientation and shape of new poles would reflect the line, form, and color of the trunks of trees throughout the forest; the conductors would be minimally obtrusive because the applicant has proposed use of non-specular conductors as described in APM SCE-3. Therefore, the elements that comprise the power line itself would meet the adopted VQOs. In addition, the ground disturbance associated with long term maintenance of the line (as evidenced in Exhibit 4.4-19), while visually apparent, would meet the VQOs because it would mimic the existing visual features of the forest, which already include cleared corridors caused by existing USFS roads and existing power lines. Under the VQO of Retention, activities must repeat form, line, color, and texture, which are frequently found in the characteristic landscape. Under the VQO of Partial Retention, activities are to remain visually subordinate to the characteristic landscape.

Segment 625-6 would cross an open patch of dry meadow inhabited by the native plant *Wyethis mollis*, a member of the sunflower family and commonly known as mule's ears. The patch of meadow is about 400 feet wide and bisected by the Fiberboard Freeway. As viewed from the road, the meadow is a unique scenic feature within this otherwise forested setting and affords expansive unconfined views of forested hillsides. APM SCE-6 states that the meadow will be spanned by locating poles at either edge of the meadow thereby avoiding a potential adverse visual effect on the scenic feature. To address the larger scenic impact of the 625 Line, APM SCE-9 states that the applicant will, in consultation with the USFS and to reduce potential project visibility, consider selective, site-specific conifer tree planting in limited areas along the new 625 Line ROW where relatively unobstructed foreground views of new structures are seen from Mount Watson Road. New trees would not be placed where they conflict with project operations or safety requirements.

In summary, although the visual effect of the Line 625 would be adverse, particularly immediately following line installation and prior to passive recolonization of trees and shrubbery, it would not be inconsistent with the existing landscape character as seen from the Fiberboard Freeway. In addition, the 625 Line alignment under Alternative 1 (PEA Alternative) crosses less land with a VQO of Retention as compared to the existing 625 Line which will be abandoned and passively restored. Integration of APM SCE-1, which outlines a series of best management practices that minimize the visual effects of linear construction within forest landscapes, as recommended by the LTBMU, would meet applicable VQOs and minimize visual effects. For these reasons, the impact would be **less than significant**.

Existing View

Simulated View

Source: Sierra Pacific 2010

Exhibit 4.4-17 Fiberboard Freeway, VP 10, Alt.1, Segment 625-3

Existing View

Simulated View

Source: Environmental Vision 2012

Exhibit 4.4-18 Fiberboard Freeway, VP 11, Alt. 1, Segment 625-5

Existing View

Simulated View

Source: Sierra Pacific 2010

Exhibit 4.4-19 Fiberboard Freeway, VP 12, Alt. 1, Segment 625-7

Mitigation Measures

No mitigation measures are required.

IMPACT 4.4-4 (Alt.1)	**Result in adverse effects with respect to lighting or glare.** The upgraded substations and conductors could introduce additional sources of lighting and glare that are more conspicuous than existing structures. Because substations would be rebuilt in the locations of existing substations (i.e., no new substations) and APMs would provide for: 1) use of non-specular conductor that is mechanically or chemically treated to reduce reflectivity, 2) use of non-reflective finishes on substation structures, and 3) screening of the rebuilt Tahoe City Substation through landscaping and other means, no substantial increase in lighting or glare is anticipated. This impact would be **less than significant**.

The upgraded substations and conductors could introduce structural lighting and sources of glare that are more conspicuous than existing structures. APM SCE-3 states that in all cases the rebuilt power lines would utilize non-specular conductors. This would eliminate the potential for glare cast by the lines under certain lighting conditions. Such conditions occur temporarily, but on a daily basis.

Substations that would be upgraded as part of the project are on existing substation sites. Because of the differences in the design and finish of the transformers at the substation in Tahoe City, and because the structures would be new, there could be an increase in glare (see Exhibit 4.4-8). Integration of APM SCE-4 into project design, however, would reduce post-project glare through use of non-reflective finishes on substation structures. In addition, glare would continue to decrease over time as the metal structures weather. APM SCE-5 describes screening through landscaping and non-vegetative means that would also be integrated into project design, and which would include planting of native conifer trees outside the perimeter fence along the southwest and southeast sides of the Tahoe City Substation site. Depending on their size, these plantings could have an immediate beneficial effect with respect to glare attenuation, and would become more effective with vegetation growth. Any new security lighting would comply with local regulations regarding shielding and control of stray light. Placer County Design Standards and Guidelines require that light bulbs not be visible to the public (i.e., are shielded), that lighting for parking areas not spillover into adjacent areas, and that no lighting be used for the purpose of advertising or blink, flash or change in intensity. For other substation upgrades, only part of the facility would be upgraded, and increases in glare would be minimally apparent, if visible at all. No other project elements would create a new source of substantial light or glare. For these reasons, the potential for impacts due to substantial light or glare would be **less than significant**.

Mitigation Measures

No mitigation measures are required.

ALTERNATIVE 2 – MODIFIED ALTERNATIVE

DIRECT AND INDIRECT IMPACTS

IMPACT 4.4-1 (Alt.2)	**Cause inconsistency with adopted plans.** The Tahoe City Community Plan (1994) and TRPA's EIP/SQIP (2001) recommend relocating the Tahoe City Substation as a means of removing it from public view and thereby improving scenic quality. Alternative 2 (Modified Alternative) proposes to rebuild the Tahoe City Substation in its current location and screen the facility from public view. For the same reasons described above in Alternative 1 (PEA Alternative), this action would not be inconsistent with the Tahoe City Community Plan or SQIP. This impact would be **less than significant**.

Because this element of the proposed project is the same under Alternative 2 (Modified Alternative) as it is for Alternative 1 (PEA Alternative), the impact would be same as Impact 4.4-1 (Alt. 1). The 1994 Tahoe City Community Plan and the SQIP of TRPA's 2001 EIP recommend the Tahoe City Substation be relocated to remove the substation from public view and thereby improve scenic quality. Alternative 2 (Modified Alternative) proposes to rebuild the substation in its original location and screen the rebuilt substation from public view. Like Alternative 1 (PEA Alternative), the APMs that have been integrated into the project design (including APM SCE-5, Screening) would achieve the same objective as the plans for eliminating public views of the Tahoe City Substation. Therefore, this impact would be **less than significant**.

Mitigation Measures

No mitigation measures are required.

IMPACT 4.4-2 (Alt.2)	**Create views of rebuilt power lines from sensitive locations.** The existing 625 and 650 Lines would be rebuilt in the alignment and configuration proposed under Alternative 2 (Modified Alternative) using larger poles that would be more conspicuous than the existing line in views from certain areas. However, the most sensitive viewing areas would be avoided by Alternative 2 (Modified Alternative). In addition, implementation of proposed APMs would minimize scenic effects during construction through specific screening and management practices; and require use of specific materials, colors, and textures for project elements. Scenic impacts would be **less than significant**.

The most sensitive viewing areas affected by Alternative 1 (PEA Alternative) would be avoided by Alternative 2 (Modified Alternative). Even though the larger poles would be more conspicuous than the existing power line, they would meet management targets for scenic quality in areas where they would be seen. In Alternative 2 (Modified Alternative), Segment 625-1A of the 625 Line would be routed outside the Truckee River corridor but closer to or within the 64-Acre Recreation Site between the river crossing and the Tahoe City Substation instead of along the south bank of the river. (The southerly alignment defined by Segment 625-1A is superior to the river-side alignment of Segment 625-1, would avoid significant scenic effects, and is the same alignment as that resulting from implementation of APM SCE-8 for the other action alternatives.)

Removal of the existing power line along the river corridor in this area would enhance the scenic quality of this unique landscape feature. However, this segment of the line would then be visible from inside the 64-Acre Recreation Site, as shown in Exhibit 4.4-20. The setting inside the 64-Acre Recreation Site includes paved roads, asphalt parking lots, portable restrooms, trash receptacles, paved bike trails, and grassy areas among scattered pine and fir trees. The 64-Acre Recreation Site has an assigned VQO of Partial Retention.

Existing View

Simulated View

Source: POWER 2012

Exhibit 4.4-20 64-Acre Recreation Site, VP 13, Alt. 2, Segment 625-1A

As shown in Exhibit 4.4-20, Alternative 2 (Modified Alternative) would introduce poles and conductors that would require some tree removal. The poles would generally be shorter than the trees in the immediate area. The new alignment would parallel a paved path used by cyclists, pedestrians, and through-hikers on the Tahoe Rim Trail and would cross the access way to the bicycle/pedestrian bridge that crosses the river and the raft launch site immediately east of the bridge. In the context of a recreational area with a mix of natural (e.g., trees, river) and urban (e.g., roadways, bridges, structures, parking areas) features, Segment 625-1A introduces a strong degree of visual change in a setting with high visual sensitivity. Segment 625-1A under Alternative 2 (Modified Alternative) would provide a benefit to views from SR 89 and the associated TRPA travel route rating by moving the power line from the view corridor of the scenic highway to behind the line of trees on the south bank of the Truckee River. This would render the line visible to users of the 64-Acre Recreation Site, and when viewed in the immediate foreground the new poles would be visually dominant features. When viewed at greater distances within the larger landscape context, however, the poles would visually blend with the surrounding trees in terms of line, form, and color. As a result, Segment 625-1A would meet the adopted VQO of Partial Retention that applies to the 64-Acre Recreation Site. The impact of Line Segment 625-1A on scenic resources would be less than significant. (See Section 4.8, Recreation, for discussion of impacts relative to recreation experience at the 64-Acre Recreation Site.)

Segment 650-2 would not be routed along the east side of SR 267 as it is in Alternative 1 (PEA Alternative). Instead, it would be rebuilt as a double-circuit line with the 625 Line in essentially the same corridor as the existing 625 Line where it crosses SR 267 at Brockway Summit and heads eastward. The double-circuit line would require a 65-foot-wide permanent ROW, wider than the 40-foot permanent ROW required for single-circuit lines. The 650 Line would be removed from TRPA Roadway Travel Unit 41 – Brockway Summit. The existing poles in this area support distribution and communications lines as well as the power line. Once the power line has been removed and new line installed, the existing poles along the highway would be topped just above the distribution and communications lines and left in place, which would shorten the existing poles. Alternative 2 (Modified Alternative) would therefore result in a beneficial impact on the view corridor along SR 267 south and east of Brockway Summit. Line construction along the existing ROW would have similar effects described under Alternative 1 (PEA Alternative), but would affect fewer viewers and would be largely hidden by the forest canopy.

Segment 650-3 would be routed along the east side of SR 267 from Brockway Summit to Martis Valley, following the route as identified for Alternative 1 (PEA Alternative). Segment 650-3 is outside the Lake Tahoe Basin and therefore not within a TRPA Roadway Travel Unit, but within a county-identified scenic corridor. Segment 650-4A crosses SR 267 and heads in a westward direction staying south of Martis Creek. It would differ from Alternative 1 (PEA Alternative) in that the line would be moved northward toward the creek by up to about 350 feet. The existing line supports distribution lines as well as the power line. Both would be transferred to the new poles and the existing poles would be removed.

The existing 650 Line in this area is about 1,050 feet south of Martis Creek. A public trail leads from a gravel parking area off of SR 267. The trail generally follows the creek in this area, staying on its north side. The existing line is visible to the south from the trail. In Alternative 2 (Modified Alternative), Segment 650-4A would be aligned closer to the trail than the existing line. It would be about 750 feet south of the creek and the trail. See Exhibit 4.4-21. The poles of the rebuilt line appear larger in the simulation and the new line is perceptibly closer to the viewer. However, the taller poles and alignment of 650-4A do not change the character of the scene or substantially disrupt the existing view for the same reasons discussed under Alternative 1 (PEA Alternative).

Overall, implementation of Alternative 2 (Modified Alternative) would not result in a failure to meet management targets for scenic quality established by local agencies. This impact would be **less than significant**. As compared to Alternative 1 (PEA Alternative), Alternative 2 (Modified Alternative) would have visual impacts that are locally greater (such as along Martis Creek), and locally lesser (such as the view corridor from SR 89 west of Tahoe City and from SR 267 south of Brockway Summit).

Existing View

Simulated View

Source: POWER 2012

Exhibit 4.4-21 Martis Creek Trail, VP 5, Alt.2, Segment 650-4A

Mitigation Measures

No mitigation measures are required.

IMPACT 4.4-3 (Alt.2)	**Compliance with USFS Visual Quality Objectives.** Under Alternative 2 (Modified Alternative), portions of the 625 Line would be constructed within a new alignment on NFS lands within a new ROW and these areas would require new access. The visual effect of the new cleared ROW, new access ways, and rebuilt power line would meet management goals for visual quality on NFS lands during construction and long term operation of the project. This impact would be **less than significant**.

The impact of Alternative 2 (Modified Alternative) would be similar to that of Impact 4.4-3 (Alt. 1). The only differences between Alternative 1 (PEA Alterative) and Alternative 2 (Modified Alternative) on NFS lands between SR 89 and SR 267 involve Segments 625-4A, 625-6A and 625-8A. Segments 625-2, 625-3, 625-5, and 625-7 would be the same as Alternative 1 (PEA Alternative). Under Alternative 2 (Modified Alternative) the power line would be briefly visible from the Tahoe Rim Trail and more frequently visible along the Fiberboard Freeway. Similar to Segment 625-4 in Alternative 1 (PEA Alternative), Segment 625-4 A under Alternative 2 (Modified Alternative) would be on a north-facing slope outside the boundary of the Tahoe Basin and within the Tahoe National Forest. However, it would be located on the slope just above the Fiberboard Freeway rather than below it. This would reduce the visibility of the line from Fire Road 6 to the north and would preserve the scenic vistas to the north as seen from the Fiberboard Freeway (see Exhibit 4.4-22). Segment 625-6A would differ from Alternative 1 (PEA Alternative) in that it would deviate from the Fiberboard Freeway in the north-south direction for about 1 mile.

Segment 625-6A and its associated ROW would be hidden from view along the Fiberboard Freeway in this location. Segment 625-8A would differ from 625-8 under Alternative 1 (PEA Alternative) by following the alignment of the existing 625 Line from SR 267 heading westward for the first 0.5 mile before turning southward to meet the Fiberboard Freeway. In a manner similar to Segment 625-6A, this would make the line less apparent from the Fiberboard Freeway as compared to Alternative 1 (PEA Alternative).

As with Alternative 1 (PEA Alternative), a new cleared ROW for the line and new access ways to allow construction and long-term maintenance would be created. Under Alternative 2 (Modified Alternative), approximately 13.6 miles of new access way would be created within the power line ROW and approximately 7.8 miles of access ways and spurs would be constructed outside the ROW. Also, a total of approximately 1.3 miles of existing roads would be improved to allow trucks to use the roads during project construction. These totals are less than under Alternative 1 (PEA Alternative). Comparison of the lengths of the existing and proposed 625 Line under Alternative 2 (Modified Alternative) in terms of the VQOs on USFS lands through which they traverse is shown in Table 4.4-4. Most of the proposed 625 Line under Alternative 2 (Modified Alternative) would be in a landscape with a VQO of Partial Retention (about 11.4 miles), and a smaller portion of the line would be in Retention (about 2.6 miles) and Modification (about 0.4 mile). Compared to the existing 625 Line, which would be abandoned and allowed to naturally revegetate, Alternative 2 (Modified Alternative) would reduce the length of the line that would be located in a landscape with a VQO of Retention.

The prominence of the poles and conductors, and the presence of a swath of cleared land, would not be uncharacteristic of the existing visual environment, a forest that already has numerous openings caused by existing power lines and USFS roads. The number of visible corridors of cleared land would be reduced under Alternative 2 (Modified Alternative) as compared to Alternative 1 (PEA Alternative). Like Alternative 1 (PEA Alternative), although the visual effect of the 625 Line would be adverse, particularly immediately following line installation (prior to passive recolonization of trees and shrubbery), it would not be inconsistent with the existing landscape character as seen from the Fiberboard Freeway. In addition, the 625 Line as proposed in Alternative 2 (Modified Alternative) would cross less land with a VQO of Retention as compared to the existing

Existing View

Simulated View

Source: POWER 2012

Exhibit 4.4-22 Fiberboard Freeway, VP 14, Alt. 2, Segment 625-4A

625 Line, which would be abandoned and passively restored. Implementation of APM SCE-1, which outlines a series of best management practices that minimize the visual effects of linear construction within forest landscapes, as recommended by the LTBMU, would meet applicable VQOs and minimize visual effects. For these reasons, the impact would be **less than significant**.

Mitigation Measures

No mitigation measures are required.

IMPACT 4.4-4 (Alt.2)	**Result in adverse effects with respect to lighting or glare.** The upgraded substations and line conductors could introduce structure lighting and glare that are more conspicuous than existing structures. Because substations would be rebuilt in the locations of existing substations (i.e., no new substations) and APMs would provide for: 1) use of non-specular conductor that is mechanically or chemically treated to reduce reflectivity, 2) use of non-reflective finishes on substation structures, and 3) screening of the rebuilt Tahoe City Substation through landscaping and other means, no substantial increase in lighting or glare is anticipated. This impact would be **less than significant**.

Structures and substations that could potentially create glare or emit excessive lighting are the same as described under Alternative 1 (PEA Alternative). Therefore, for the same reasons discussed under Alternative 1 (PEA Alternative), Alternative 2 (Modified Alternative) would have a **less-than-significant** impact with respect to light or glare.

Mitigation Measures

No mitigation measures are required.

ALTERNATIVE 3 – ROAD FOCUSED ALTERNATIVE

DIRECT AND INDIRECT IMPACTS

IMPACT 4.4-1 (Alt.3)	**Cause inconsistency with adopted plans.** The Tahoe City Community Plan (1994) and TRPA's EIP/SQIP (2001) recommend relocating the Tahoe City Substation as a means of removing it from public view and thereby improving scenic quality. Alternative 3 (Road Focused Alternative) proposes to rebuild the Tahoe City Substation in its current location and screen the facility from public view. For the same reasons described above in Alternative 1 (PEA Alternative), this action would not be inconsistent with the Tahoe City Community Plan or SQIP. This impact would be **less than significant**.

Because this element of the proposed project is the same under Alternative 3 (Road Focused Alternative) as it is for Alternative 1 (PEA Alternative), the impact would be same as Impact 4.4-1 (Alt. 1). The 1994 Tahoe City Community Plan and the SQIP of TRPA's 2001 EIP recommend that the Tahoe City Substation be relocated to remove the substation from public view and thereby improve scenic quality. Alternative 3 (Road Focused Alternative) proposes to rebuild the substation in its original location and screening the rebuilt substation from public view. Like Alternative 1 (PEA Alternative), the APMs that have been integrated into the project design (including APM SCE-5, Screening) would achieve the same objective as the plans for eliminating public views of the Tahoe City Substation. Therefore, the impact would be **less than significant**.

Mitigation Measures

No mitigation measures are required.

IMPACT 4.4-2 (Alt.3)	**Create Views of rebuilt power lines from sensitive locations.** The existing 625 and 650 Lines would be rebuilt in the alignment and configuration proposed under Alternative 3 (Road Focused Alternative) using larger poles that would be more conspicuous than the existing line in views from certain public recreation areas, bike trails, and scenic roadway corridors. This is especially true in areas in which the lines would be built in a double circuit, which requires even larger poles. Increased visibility of the rebuilt lines could fail to meet management targets for scenic quality established by lead agencies. However, because implementation of proposed APMs would minimize scenic effects during construction through specific screening and management practices; require use of specific materials, colors, and textures for project elements; and modify power pole and line placement such that views from sensitive locations and scenic resources is eliminated or minimized, potential scenic impacts would be reduced to **less-than-significant** levels.

Under Alternative 3 (Road Focused Alternative), Segment 625-1 of the 625 Line would be the same as under Alternative 1 (PEA Alternative) and would have the same impacts. Implementation of APM SCE-8 would set the line back from the river corridor toward the south, as described above.

Segment 650-2/D-C OH-2 (double-circuited, overhead) of the 650 Line would have the same alignment as 650-2 under Alternative 1 (PEA Alternative), but would be constructed as a double-circuit configuration with the 625 Line added to the poles. The distribution and communication lines that are on the same poles as the existing 650 Line would be transferred to the new double-circuit poles. Segment 650-1/D-C OH-1A would extend the 650 Line farther south than the existing line. It would remain along the shoulder of SR 267 for more than 1 mile instead of heading east away from the highway at about Stewart Way. Segment 650-1/D-C OH-1A (Alternative 3A) is an option that would utilize the alignment of the existing line (and of Alternative 1 [PEA Alternative]) from SR 267 to the Kings Beach Substation. In Martis Valley, Segment 650-4B would extend farther north along SR 267 than under Alternatives 1 (PEA Alternative) and Alternative 2 (Modified Alternative) by about 2 miles to Schaffer Mill Road where it would cross the highway and head westward along Schaffer Mill Road. The existing poles in Segment 650-4A would be topped just above the distribution lines and left in place.

The double-circuit configuration of Segment 650-2/D-C OH-2 would make the line more conspicuous than the existing line within TRPA Roadway Travel Unit 41 – Brockway Summit because it would require larger poles, the poles would also carry other overhead utility lines, and the width of the permanent ROW would be 65 feet instead of 40 feet. As shown in Exhibit 4.4-23, the poles would be substantially taller, would extend father above the horizon line, and would include additional horizontal cross arms, all of which would increase the visual contrast of the 650 Line with the surrounding setting. Alternative 3 (Road Focused Alternative), however, would benefit views to the south from SR 267, because existing poles on the south side of the road would be removed. This change is only minimally apparent in Exhibit 4.4-23, but would remove manmade features from views that draw the attention of southbound travelers on SR 267. The visual change would be incremental from the viewpoint in Exhibit 4.4-23; however, extending the line along SR 267 southward by 1 mile with Segment 650-1/D-C OH-1A would add the power line to this section of Roadway Travel Unit 41. Similarly, extending the 650 Line along SR 267 in Martis Valley for another 2 miles would place the power line in the immediate foreground of the highway where currently it is absent.

Existing View

Simulated View

Source: POWER 2012

Exhibit 4.4-23 SR 267, VP 15, Alt. 3, Segment 650-2 D-C OH-2

APM SCE-7 states that from Brockway Summit southward, replacement poles for the 650 Line (in this case, both the 650 and 625 Lines, as they would be double-circuited) will be sited to eliminate or substantially reduce their visibility from the highway within the Lake Tahoe Basin, as compared to the existing 650 Line, without causing new visual impacts from tree removal or construction of access ways that would be required to erect and maintain the line. In this area, therefore, the double-circuited line would be moved eastward, away from SR 267 so as to be among the fringe of trees east of the highway (see Exhibit 4.4-24,650 Setback Alignment of APM SCE-7). As with Alternative 1 (PEA Alternative), this would result in beneficial scenic effects by further opening up views of the Tahoe Basin for travelers on SR 267. Because Alternative 3A (Road Focused Alternative with Double Circuit Option) would continue the double-circuited line along SR 267 south of the point at which the existing 650 Line (and Alternative 3, Road Focused Alternative) turns east, all the way to Speckled Avenue, implementation of SCE-7 would be infeasible. Setback of the line in this location would not be possible because existing residential structures are within 75 feet of the highway within this segment. Without setback, a double-circuited line in this location would substantially increase the visibility of manmade structures throughout this stretch and would be unmitigable. For these reasons, Alternative 3A (Road Focused Alternative with Double Circuit Option) is considered infeasible.

As described above for Alternative 1 (PEA Alternative), because implementation of APM SCE-7 would set the reconstructed power line back from SR 267 and among the trees, it would result in additional impacts of the same types as described for other wooded portions of the project area (e.g., along the Fiberboard Freeway), including tree removal, vegetation removal, clearing of rocks and boulders, and surface disturbance for creation of access ways. Impacts typical of such construction include emissions from construction vehicles (which would be required in any case), generation of fugitive dust in the vicinity of grading and surface disturbance, release of otherwise stored CO_2, temporary staging and stockpiling, and noise from vehicles and heavy equipment in areas proximate to active construction.

As described above for Alternative 1 (PEA Alternative), tree removal would be the most pronounced effect of APM SCE-7 implementation, and would be greater for Alternative 3 (Road Focused Alternative) because the line would be double-circuited, requiring a larger permanent ROW of 65 feet. Construction of the power line along SR 267 without APM SCE-7 would result in permanent and temporary impacts to forest land, including tree removal, release of CO_2, and loss of CO_2 sequestration potential. Implementation of the revised, or setback, alignment of APM SCE-7 would result in additional tree removal and associated effects. Using the methodology described above under Alternative 1 (PEA Alternative), the increase in impacts to forestry resources was calculated. Implementation of APM SCE-7 for Alternative 3 (Road Focused Alternative) would result in approximately 7.4 additional acres of forest land impacts and removal of approximately 1,600 additional trees greater than 1-inch dbh. These, and related tree removal effects, are shown in Table 4.4-5. The numerical differences for implementation of APM SCE-7 for Alternative 3 (Road Focused Alternative) are similar to those for Alternative 1 (PEA Alternative) due to the similar 65-foot construction ROW needed for the setback alignment; however, this represents a proportionally greater impact for Alternative 3 (Road Focused Alternative). Permanent loss of trees would be greater for Alternative 3 (Road Focused Alternative) because the line requires a larger permanent ROW of 65 feet, compared to the temporary ROW (12.5 feet on either side of the permanent 40-foot ROW) that would be allowed to regenerate under Alternative 1 (PEA Alternative).

Construction and operational activities that would occur on the additional 7.4 acres of land would be the same as those that would occur in other, similar portions of the project area, and would be subject to all of the APMs to which the applicant has committed to reduce impacts to scenic resources, air quality, biological resources, cultural resources, soils, hazards and hazardous materials, water quality, noise, recreation, utilities, and transportation. Implementation of APM SCE-7 as part of Alternative 3 (Road Focused Alternative) would increase the total number of trees greater than 1-inch diameter removed for the entire alternative by 3.4 percent compared to Alternative 3 (Road Focused Alternative) without APM SCE-7. The loss of this amount over the additional 7.4 acres of forest land impacted would not substantially reduce the size, continuity, or integrity of the forest land in the area or interrupt the view from sensitive locations and scenic resources.

Table 4.4-5 Forest Land* Impact Comparison for APM SCE-7 for Alternative 3 (Road-Focused Alternative)

Impact Variable	Impact without Implementation of APM SCE-7	Impact with Implementation of APM SCE-7	Change in Forest Land Impact from Implementation of SCE-7	
			Difference	Percentage
Permanent Forest Land Impacts (Acres)	93.1	100.5	+7.4	7.9%
Temporary Forest Land Impacts (Acres)	92.4	92.2	-0.2	-0.2%
Total Number of Trees ≥1" dbh to be Removed (Permanent and Temporary Impact Areas)	47,448	49,051	+1,603	3.4%
Total Cubic Foot Volume of Trees ≥1" dbh to be Removed	668,169	692,795	+24,626	3.7%
Total Merchantable Timber Volume in Cubic Feet (Conifers ≥9" dbh)	456,064	472,884	+16,820	3.7%
Total $MTCO_2e$ Released	6,706	6,953	+247	3.7%
Lost $MTCO_2e$ Sequestration Potential	7,000	7,591	+591	8.4%
$MTCO_2e$ Sequestered Over Time in Temporary Impact Areas	13,500	13,471	-29	-0.2%

* Forest Land, as described in Section 4.3, Forestry Resources, is defined as land that can support 10 percent native tree cover of any species that allows for management of timber, aesthetics, fish and wildlife, recreation, and other public benefits.

Implementation of APM SCE-7 would prevent adverse scenic impacts from increased visual exposure of the power line from sensitive locations because the rebuilt power line would be less conspicuous than the existing lines. As with Alternative 1 (PEA Alternative), by reducing the amount of manmade features that would be in view from TRPA Roadway Travel Units, the potential for reductions in adopted TRPA Scenic Threshold Ratings would not only be avoided, the composite score of the Roadway Travel Unit would improve, resulting in a beneficial scenic effect. In addition, the USFS VQO for these locations is Retention, which requires that management activities repeat the form, line, color, and texture frequently found in the characteristic landscape. For these portions of Segment 650-2/D-C OH-2, incorporation of APM SCE-7 into the project design would be effective in decreasing the degree of visual change to a low level. Given the high sensitivity of the location but low level of visual change, the impact on scenic resources would be **less than significant** (see Table 4.4-2, Matrix for Determining Scenic Impact Significance/Intensity, for the guidelines used to evaluate the scenic effects of the project).

Mitigation Measures

No mitigation measures are required.

625-9
D-C OH-4

650-3

267

625-8A

Brockway Summit

625-8

650-2
D-C OH-2

267

Legend

- Line Segment Boundary
- Survey Area
- Existing 625 Line
- 625 PEA Alternative
- 625 Modified Alternative
- 625 Road Focused/625 Proposed Alternatives
- 650 PEA/650 Proposed Alternatives (Existing 650 Line)
- Double Circuit Option Segment
- 650 Setback Alignment of APM SCE-7
- Staging Area
- Seasonal Drainage
- Tahoe Regional Planning Agency Boundary

0 200 400 Feet

N

Note: Alignments may be shifted for display purposes.

Basemap: NAIP 2010

G10010071 01 458

Source: Data provided by TriSage in 2013; adapted by Ascent Environmental in 2013

Exhibit 4.4-24A

650 Setback Alignment of APM SCE-7 - Map 1 of 2

ASCENT ENVIRONMENTAL

Legend

- Line Segment Boundary
- Survey Area
- Existing 625 Line
- 650 PEA/650 Proposed Alternatives (Existing 650 Line)
- Double Circuit Option Segment
- 650 Setback Alignment of APM SCE-7
- Staging Area
- Seasonal Drainage
- Tahoe Regional Planning Agency Boundary

0 200 400 Feet

Note: Alignments may be shifted for display purposes.

Basemap: NAIP 2010 G10010071 01 459

625-9

650-2
D-C OH-2

267

650-1
D-C OH-1

267

D-C OH-1A

Source: Data provided by TriSage in 2013; adapted by Ascent Environmental in 2013

Exhibit 4.4-24B

650 Setback Alignment of APM SCE-7 - Map 2 of 2

ASCENT ENVIRONMENTAL

IMPACT 4.4-3 (Alt.3)	**Compliance with USFS VQOs.** In rebuilding the 625 Line under Alternative 3 (Road Focused Alternative), various power line segments would utilize a new alignment on NFS lands within a new ROW, and would require new access. However, under Alternative 3 (Road Focused Alternative), the alignment of the 625 Line on NSF lands west of SR 267 would essentially be along the shoulder of the Fiberboard Freeway and would thus require substantially fewer miles of new cleared ROW and new access ways relative to other action alternatives. The visual effect of the new cleared ROW, new access ways, and rebuilt power line would meet management goals for visual quality on NFS lands during construction and long term operation of the project. This impact would be **less than significant**.

Under Alternative 3 (Road Focused Alternative) most of the rebuilt 625 Line between SR 89 and SR 267 would be within a new ROW. This would be true of Segments 625-3, 625- 4, 625-5, 625-6, 625-7, and 625-8. The route of the line under Alternative 3 (Road Focused Alternative) would stay along the Fiberboard Freeway through much of this area. Poles would generally be placed as close as 10 to 30 feet from the road. As shown in Exhibit 4.4-25, this would place poles and conductors in the immediate foreground view. The vertical form and lines introduced by the poles would repeat the basic shape of the tree trunks and the proposed poles would not typically exceed the height of mature trees. In addition, integration of non-specular conductors (see APM SCE-2) and self-weathering dark brown color poles, or equivalent (see APM SCE-3) into the project design would minimize the color and texture contrasts. However, the horizontal lines and shapes introduced by the conductors and pole cross-arms would be uncharacteristic of the visual elements found in the existing landscape.

In contrast to Alternative 1 (PEA Alternative), in which the Line 625 would intermittently be visible, the new line would be visible along much of the length of the Fiberboard Freeway, with the exception of places where the road makes sharper turns. In these instances, trees would be retained between the road and the rebuilt line. Otherwise, roadside trees would be cleared to accommodate the line. New access ways to allow construction and long-term maintenance of the line would be established where necessary. However, most access would occur from the existing Fiberboard Freeway. Under Alternative 3 (Road Focused Alternative), approximately 9.3 miles of new access way would be created within the power line ROW and approximately 2.2 miles of access way and spurs would be constructed outside the ROW. In addition, approximately 0.7 mile of existing road would need to be improved to accommodate truck traffic during construction. Alternative 3A (Road Focused Alternative with Double Circuit Option), which includes Segment 650-1/D-C OH-1A, would reduce the new access way within the ROW to 8.4 miles. Mileage for other access ways and spurs and road improvements would be the same. These mileage totals are less than under Alternatives 1 (PEA Alternative) and Alternative 2 (Modified Alternative).

While the total number of poles and the length of conductors that would be visible to travelers on the Fiberboard Freeway would increase substantially compared to Alternative 1 (PEA Alternative) and Alternative 2 (Modified Alternative), the adverse visual effects of vegetation management would be less pronounced. This is because the new ROW would follow the existing roadway much more closely and there would be fewer locations from which travelers would experience gaps in the forest similar to the simulation shown in Exhibit 4.4-19. In addition, fewer access ways would need to tee off the road. As shown in Exhibit 4.4-25, the vegetation management associated with Alternative 3 (Road Focused Alternative) would also open up the viewshed, increasing the depth and variety of views and increasing the portion of visible sky. This would have a positive effect that would serve to partially counterbalance the negative effect of increase number of visible poles. In addition, the 625 Line would generally be constructed on the up-hill side of the Fiberboard Freeway. In those places where forest cover is thin or absent and where terrain is steep, view opportunities occur in the downhill direction, and viewer attention would generally be focused away from the 625 Line.

Existing View

Simulated View

Source: POWER 2012

Exhibit 4.4-25 Fiberboard Freeway, VP 16, Alt. 3, Segment 625-5

Comparison of the lengths of the existing and proposed 625 Line under Alternative 3 (Road Focused Alternative) in terms of the VQOs on USFS lands through which they traverse is shown in Table 4.4-4. Most of the proposed 625 Line under Alternative 3 (Road Focused Alternative) would be in a landscape with a VQO of Partial Retention (about 9.6 miles), and a smaller portion of the line would be in Retention (about 1 miles) and Modification (about 0.5 mile). Compared to the existing 625 Line alignment, which would be abandoned and allowed to naturally revegetate, Alternative 3 (Road Focused Alternative) would reduce the length of the 625 Line that would be located in a landscape with a VQO of Retention. This alternative is also preferable to Alternative 1 (PEA Alternative) and Alternative 2 (Modified Alternative) in terms of the length of power line that would cross forest land with a VQO of Retention.

Work crews and equipment would be visible to the public during logging, removal of other vegetation, and grading of new access ways. They would also be visible in the area when installing the new poles and stringing the lines. Once constructed, the new line and cleared ROW would be clearly visible from the Fiberboard Freeway. Access roads for long term maintenance of the line would be visible where they lead from the Fiberboard Freeway or would otherwise be in close proximity to the road.

Like Alternative 1 (PEA Alternative), although the visual effect of the Line 625 would be adverse, particularly immediately following line installation (prior to passive recolonization of trees and shrubbery), it would not be inconsistent with the existing landscape character as seen from the Fiberboard Freeway. In addition, the 625 Line would cross less land with a VQO of Retention as compared to the existing 625 Line which would be abandoned and passively restored. Integration of APM SCE-1, which outlines a series of best management practices that minimize the visual effects of linear construction within forest landscapes, as recommended by the LTBMU, would meet applicable VQOs and minimize visual effects. For these reasons, the impact would be **less than significant**.

Mitigation Measures

No mitigation measures are required.

IMPACT 4.4-4 (Alt.3)	**Result in adverse effects with respect to lighting or glare.** The upgraded substations and conductors could introduce structure lighting and glare that are more conspicuous than existing structures. Because substations would be rebuilt in the locations of existing substations (i.e., no new substations) and that APMs would provide for: 1) use of non-specular conductor that is mechanically or chemically treated to reduce reflectivity, 2) use of non-reflective finishes on substation structures, and 3) screening of the rebuilt Tahoe City Substation through landscaping and other means, no substantial increase in lighting or glare is anticipated. This impact would be **less than significant**.

Structures and substations that could potentially create glare or emit excessive lighting are the same as described under Alternative 1 (PEA Alternative). Therefore, for the same reasons discussed under Alternative 1 (PEA Alternative), Alternative 3 (Road Focused Alternative) would have a **less-than-significant** impact with respect to light or glare.

Mitigation Measures

No mitigation measures are required.

ALTERNATIVE 4 – PROPOSED ALTERNATIVE

DIRECT AND INDIRECT IMPACTS

IMPACT 4.4-1 (Alt.4)	**Cause inconsistency with adopted plans.** The Tahoe City Community Plan (1994) and TRPA's EIP/SQIP (2001) recommend relocating the Tahoe City Substation as a means of removing it from public view and thereby improving scenic quality. Alternative 4 (Proposed Alternative) would rebuild the Tahoe City Substation in its current location and screen the facility from public view. For the same reasons described above in Alternative 1 (PEA Alternative), this action would not be inconsistent with the Tahoe City Community Plan or SQIP. This impact would be **less than significant**.

Because this element of the proposed project is the same under Alternative 4 (Proposed Alternative) as it is for Alternative 1 (PEA Alternative), the impact would be same as Impact 4.4-1 (Alt. 1). The 1994 Tahoe City Community Plan and the SQIP of TRPA's 2001 EIP recommend the Tahoe City Substation be relocated to remove the substation from public view and thereby improve scenic quality. Alternative 4 (Proposed Alternative) proposes to rebuild the substation in its original location and screen rebuilt substation from public view. Like Alternative 1 (PEA Alternative), the APMs that have been integrated into the project design (including APM SCE-5, Screening) would achieve the same objective as the plans for eliminating public views of the Tahoe City Substation. The impact to scenic resources due to inconsistency with adopted plans would be **less than significant**.

Mitigation Measures

No mitigation measures are required.

IMPACT 4.4-2 (Alt.4)	**Create views of rebuilt power lines from sensitive locations.** The existing 625 and 650 Lines would be rebuilt in the alignment and configuration proposed under Alternative 4 (Proposed Alternative) using larger poles that would be more conspicuous than the existing line in views from certain public recreation areas, bike trails, and scenic roadway corridors. This is especially true in areas in which the lines would be built in a double circuit, which requires even larger poles. Increased visibility of the rebuilt lines could fail to meet management targets for scenic quality established by lead agencies. However, because implementation of proposed APMs would minimize scenic effects during construction through specific screening and management practices; require use of specific materials, colors, and textures for project elements; and modify power pole and line placement such that views from sensitive locations and scenic resources is eliminated or minimized, potential scenic impacts would be reduced to **less-than-significant** levels.

Under Alternative 4 (Proposed Alternative), the 625 Line would be the same as Alternative 3 (Road Focused Alternative), described above. Segment 625-1 of the 625 Line would be the same as under Alternative 1 (PEA Alternative) and would have the same impacts. Implementation of APM SCE-8 would set the line back from the river corridor toward the south, also as described above.

Under Alternative 4 (Proposed Alternative), the new 650 Line would be the same as that described for Alternative 1 (PEA Alternative) from Brockway Summit to Truckee, and the same as Alternative 3 (Road Focused Alternative) from Brockway Summit to Kings Beach. As such, the alignment would follow the alignment of the existing 650 Line but with a double circuit from Brockway Summit to Kings Beach. From Brockway Summit to King Beach, the new 650 Line would increase the visibility of man-made features along the highway corridor, which could adversely affect TRPA travel route ratings and the Scenic Quality Ratings of TRPA scenic resources.

This would involve increased height and mass of existing poles, a wider 65-foot permanent ROW associated with the double-circuit, and the placement of new poles along the highway corridor where the existing 650 Line deviates out of view. The visual impacts of Alternative 4 (Proposed Alternative) from scenic highways would be greater than Alternative 1 (PEA Alternative) and Alternative 2 (Modified Alternative) because power line segments would be concentrated along the scenic highway corridors, and thus have a greater potential to adversely affect views.

Like Alternative 3 (Road Focused Alternative), Alternative 4 (Proposed Alternative) would implement APM SCE-7, which states that from Brockway Summit southward, replacement poles for the 650 Line (in this case, both the 650 and 625 Lines, as they would be double-circuited) will be sited to eliminate or substantially reduce their visibility from the highway within the Lake Tahoe Basin, as compared to the existing 650 Line, without causing new visual impacts from tree removal or construction of access ways that would be required to erect and maintain the line See Exhibit 4.4-24, 650 Setback Alignment of APM SCE-7). As with Alternative 3 (Road Focused Alternative), this would result in beneficial scenic effects by further opening up views of the Lake Tahoe Basin for travelers on SR 267.

As described above for Alternative 1 (PEA Alternative), because implementation of APM SCE-7 would set the reconstructed power line back from SR 267 and among the trees, it would result in additional impacts of the same types described for other wooded portions of the project area (e.g., along the Fiberboard Freeway), including tree removal, vegetation removal, clearing of rocks and boulders, and surface disturbance for creation of access ways. Impacts typical of such construction activities include emissions from construction vehicles (which would be required in any case), generation of fugitive dust in the vicinity of grading and surface disturbance, release of otherwise stored CO_2, temporary staging and stockpiling, and noise from vehicles and heavy equipment in areas proximate to active construction.

As described above for Alternative 1 (PEA Alternative), tree removal would be the most pronounced effect of APM SCE-7 implementation. Construction of the power line along SR 267 without APM SCE-7 would result in permanent and temporary impacts to forest land, including tree removal, release of CO_2, and loss of CO_2 sequestration potential. Implementation of the revised, or setback, alignment of APM SCE-7 would result in additional tree removal and associated effects. Using the methodology described above under Alternative 1 (PEA Alternative), the change in impacts to forestry resources was calculated, as presented in Table 4.4-6, Forest Land Impact Comparison for APM SCE-7 for Alternative 4 (Proposed Alternative).

Implementation of APM SCE-7 for Alternative 4 (Proposed Alternative) would result in approximately 7.4 additional acres of forest land impacts and removal of approximately 1,603 additional trees greater than 1-inch dbh. The percentage of change in impacts that would result from implementation of APM SCE-7 for Alternative 4 (Proposed Alternative) are similar to those for Alternative 3 (Road Focused Alternative) due to the similar 65-foot construction ROW needed for the setback alignment. Tree removal would be greater for these alternatives because the 65-foot construction ROW would be a permanent impact area, whereas only 40 feet of the 65-foot construction ROW would be permanent impact with implementation of Alternative 1 (PEA Alternative). Impacts in this area would be the same as those described above for Alternative 3 (Road Focused Alternative).

Table 4.4-6 Forest Land* Impact Comparison for APM SCE-7 for Alternative 4 (Proposed Alternative)				
Impact Variable	Impact without Implementation of APM SCE-7	Impact with Implementation of APM SCE-7	Change in Forest Land Impact due to Implementation of SCE-7	
			Difference	Percentage
Permanent Forest Land Impacts (Acres)	92.8	100.2	+7.4	8.0%
Temporary Forest Land Impacts (Acres)	91.6	91.4	-0.2	-0.2%
Total Number of Trees ≥1" dbh to be Removed (Permanent and Temporary Impact Areas)	47,101	48,704	+1,603	3.4%
Total Cubic Foot Volume of Trees ≥1" dbh to be Removed	666,073	690,699	+24,626	3.7%
Total Merchantable Timber Volume in Cubic Feet (Conifers ≥9" dbh)	454,823	471,643	+16,820	3.7%
Total $MTCO_2e$ Released	6,682	6,929	+247	3.7%
Lost $MTCO_2e$ Sequestration Potential	6,966	7,557	+591	8.5%
$MTCO_2e$ Sequestered Over Time in Temporary Impact Areas	13,383	13,354	-29	-0.2%
* Forest Land, as described in Section 4.3, Forestry Resources, is defined as land that can support 10 percent native tree cover of any species that allows for management of timber, aesthetics, fish and wildlife, recreation, and other public benefits.				

For the same reasons described under Alternative 1 (PEA Alternative), the segment of the 650 Line from Brockway Summit to Truckee would not substantially disrupt views from the highway as compared to the existing 650 Line. Impacts would be **less than significant**.

Mitigation Measures

No mitigation measures are required.

IMPACT 4.4-3 (Alt.4) **Compliance with USFS VQOs.** In rebuilding the 625 Line under Alternative 4 (Proposed Alternative), various power line segments would utilize a new alignment on NFS lands within a new ROW, and would require new access. The alignment of the 625 Line on NSF lands west of SR 267 would essentially be along the shoulder of the Fiberboard Freeway and would thus require substantially fewer miles of new cleared ROW and new access ways relative to the other action alternatives. The visual effect of the new cleared ROW, new access ways, and rebuilt power line would meet management goals for visual quality on NFS lands during construction and long term operation of the project. This impact would be **less than significant.**

Under Alternative 4 (Proposed Alternative), the new 650 Line would be the same as that described for the Alternative 1 (PEA Alternative) from Brockway Summit to Truckee, and the same as Alternative 3 (Road Focused Alternative) from Brockway Summit to Kings Beach. As such, the alignment would follow the existing 650 Line, but with a double circuit from Brockway Summit to Kings Beach. The upgraded 625 Line would be identical to the alignment proposed for Alternative 3 (Road Focused Alternative). For the reasons described above, the impact would be **less than significant**.

Mitigation Measures

No mitigation measures are required.

IMPACT 4.4-4 (Alt.4)	**Result in adverse effects with respect to lighting or glare.** The upgraded substations and line conductors could introduce structure lighting and glare that are more conspicuous than existing structures. Because substations would be rebuilt in the locations of existing substations (i.e., no new substations) and APMs would provide for: 1) use of non-specular conductor that is mechanically or chemically treated to reduce reflectivity, 2) use of non-reflective finishes on substation structures, and 3) screening of the rebuilt Tahoe City Substation through landscaping and other means, no substantial increase in lighting or glare is anticipated. This impact would be **less than significant**.

Structures and substations that could potentially create glare or emit excessive lighting are the same as described under Alternative 1 (PEA Alternative). Therefore, for the same reasons discussed under Alternative 1 (PEA Alternative), Alternative 4 (Proposed Alternative) would have a **less-than-significant** impact with respect to light or glare.

Mitigation Measures

No mitigation measures are required.

ALTERNATIVE 5 – NO ACTION/NO PROJECT ALTERNATIVE

DIRECT AND INDIRECT IMPACTS

IMPACT 4.4-1 (Alt.5)	**Inconsistency with adopted plans.** Under Alternative 5 (No Action/No Project Alternative), no change to the Tahoe City Substation would be made as part of the project and visibility of the facility from public viewpoints would continue to be what it is today. Any potential increases in visibility resulting from necessary deferred maintenance would be appropriately mitigated in accordance with TRPA permit requirements and this impact would be **less than significant**.

The existing circumstance regarding the location of the substation and suggestion for its relocation by adopted plans would not be changed by this alternative. Adopted plans would still encourage relocating the substation as they have since 1994. Alternative 5 (No Action/No Project Alternative) would not provide an opportunity to address this issue since no physical changes to the substation facility itself would occur.

Under Alternative 5 (No Action/No Project Alternative), actions would include completion of deferred maintenance to comply with current standards for vegetation clearing. This would include removal of trees that presently are inside the fence surrounding the Tahoe City Substation. Some of these trees provide at least partial screening of substation components, particularly for views from SR 89. Removal or trimming of trees inside the fence likely would increase the visual exposure of the substation. A permit from TRPA would be required to remove any trees. The permit process would take into account the likely visual consequences of removing the trees. Permit conditions would be imposed, as necessary, to address such effects; as a result Alternative 5 (No Action/No Project Alternative) would have a **less-than-significant** impact on scenic resources due to inconsistencies with adopted plans. A description of potential permit conditions is not necessary to maintain a conclusion of a less-than-significant effect because the permit would not be issued without a plan that either maintains or enhances the appearance of the substation site from the TRPA Roadway Travel Units.

Mitigation Measures

No mitigation measures are required.

IMPACT 4.4-2 (Alt.5)	**Create views of existing rebuilt power lines from sensitive locations.** Under Alternative 5 (No Action/No Project Alternative), there would be no changes to the North Lake Tahoe Transmission System. Under this alternative, project-related actions would be limited to operation and maintenance, including completion of deferred maintenance. This is not expected to create new views of the existing power lines. Therefore, this impact would be **less than significant**.

Actions associated with this alternative would be limited to the operation and maintenance of the existing power lines and completion of deferred maintenance to comply with current standards for vegetation clearing and to meet annual inspection requirements. No details regarding specific locations of tree trimming or removal are known at this time. It is unlikely that actions associated with Alternative 5 (No Action/No Project Alternative) would create substantial new views of the existing power lines from sensitive locations. There would be no effect on adopted Scenic Threshold Ratings. This impact would be **less than significant**.

Mitigation Measure

No mitigation is required.

IMPACT 4.4-3 (Alt.5)	**Fail to meet USFS VQOs.** Under Alternative 5 (No Action/No Project Alternative), there would be no changes to the North Lake Tahoe Transmission System. Actions would be limited to operation and maintenance, including completion of deferred maintenance to raise the existing system to current standards. These actions would result in conditions that meet adopted VQOs. Therefore, this impact would be **less than significant**.

Actions associated with this alternative would be limited to the operation and maintenance of the existing power lines and completion of deferred maintenance to comply with current standards for vegetation clearing and to meet annual inspection requirements. No details regarding specific locations of tree trimming or removal are known at this time. The existing 625 Line on NFS lands is located in areas that are largely unseen by the public. It is unlikely that Alternative 5 (No Action/No Project Alternative) would create substantial new views of the existing power lines from sensitive locations. Adopted VQOs would continue to be met. This impact would be **less than significant**.

Mitigation Measure

No mitigation measures are required.

IMPACT 4.4-4 (Alt.5)	**Result in adverse effects with respect to lighting or glare.** Implementation of Alternative 5 (No Action/No Project Alternative) would not result in alterations to the North Lake Tahoe Transmission System that would influence existing light or glare conditions. This impact would be **less than significant**.

Actions associated with this alternative would be limited to the operation and maintenance of the existing power lines and completion of deferred maintenance to comply with current standards for vegetation clearing and to meet annual inspection requirements. Although no details regarding specific locations of tree trimming or removal are known at this time, it is unlikely that actions associated with Alternative 5 (No Action/No Project

Alternative) would create light or glare that would have an adverse effect. This impact would be **less than significant**.

Mitigation Measures

No mitigation measures are required.

CUMULATIVE IMPACTS

State CEQA Guidelines Section 15355 defines a cumulative impact as two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time. The effects of past and present projects are reflected by the existing conditions in the project area. Probable future projects considered are those in the vicinity that would result in visual impacts on, or as viewed from, the visual study area defined in Section 4.4.2, which includes the immediate foreground distance zone, and limited, localized areas in the middleground distance zone. Other projects proposed in this study area that would result in visual change have the possibility to contribute to a cumulative impact if they would occur during construction and operation of any of the action alternatives. Future projects in Table 4.1-2 that are within the geographic scope of the cumulative effects analysis include the SR 89 Fanny Bridge Community Revitalization Project, the Tahoe City Vision Plan, the Martis Valley Trail, the Joerger Ranch Specific Plan, and Pollard Station Senior Neighborhood. All are in the vicinity of the Tahoe City Substation, within Martis Valley, or along SR 267, and could be seen in the same context as power line Segments 625-1,625-1A, 650-3, 650-4, and 650-4B. Each project would, in some way, change the existing visual conditions in the vicinity of the substation and the power line segments. In other areas, future projects would not be viewed simultaneously with the proposed power line upgrade project and the potential for cumulative impacts would not occur.

With integration of APMs into project design, the impacts of the project with respect to scenic resources were determined to be less than significant.

CUMULATIVE EFFECTS IN TAHOE CITY

The SR 89/Fanny Bridge Community Revitalization Project and future projects resulting from the Tahoe City Vision Plan could contribute to cumulative scenic impacts in Tahoe City, including TRPA travel route ratings along SR 89 and SR 28. Several alternatives for the SR 89/Fanny Bridge Community Revitalization Project are under consideration, but all alternatives would repair or replace Fanny Bridge, make modifications at the "Y" intersection, and construct a new bridge over the Truckee River near the east end of the Caltrans Maintenance Station. The new bridge and roadway would traverse the south side of the 64-Acre Recreation Site and align SR 89 to bypass the existing "Y" intersection of SR 89 and SR 28. The existing SR 89 and Fanny Bridge would become a local street with no change in access to existing recreational parking areas. One of the objectives of this project is to improve the river crossing's structural integrity (Fanny Bridge) and resolve safety and community concerns about the cultural values related to the historic Fanny Bridge. The SR 89/Fanny Bridge Community Revitalization Project would result in an increase in transportation-related infrastructure in the project area. The new bridge crossing would be in nearly the same location as the crossing of the power line over the Truckee River in Segment 625-1 and would be visible from the viewpoint shown in Exhibit 4.4-10.

The SR 89/Fanny Bridge Project would be a substantial undertaking (with construction of an additional bridge and interchange/roundabout) that would result in marked visual changes in the project area, changes far greater than those of the power line project. As a Community Revitalization Project, however, it is proposed to include scenic and community character enhancements throughout the project area, particularly at the existing "Y." Though design is not finalized and a final alternative is not selected, such enhancements are expected to include a reduced intersection at the existing "Y," hardscape removal, extensive landscaping, continuity of bicycle and

pedestrian trails, and other features. Ultimately, the project would be required to comply with the TRPA Code of Ordinances, including scenic requirements and threshold findings.

The Tahoe City Vision Plan would guide development of the Community Plan update and future Area Plan. Under the TRPA Code of Ordinances, future development projects would undergo a design review process to ensure they comply with applicable scenic resource standards, as well as applicable community design standards.

Although the future cumulative scenic effects of the SR 89/Fanny Bridge Community Revitalization Project and projects implemented in accordance with the Tahoe City Vision Plan and ultimately, the Community Plan update and Area Plan cannot be predicted with any specificity, land use plans would encourage individual projects to be designed to maintain or improve the roadway travel unit ratings and comply with scenic resource policies and the cumulative effects of the Fanny Bridge Project, Tahoe City Area Plan developments, and the project, considered together are likely to be substantial. However, the contribution of the power line project to the cumulative impact would not be considerable because with integration of APMs into project design, the only visible element of the project from the pedestrian bridge and SR 89 would be the conductors that cross the Truckee River. This would be a negligible visual effect compared to the effect of the Fanny Bridge and/or new developments that could be contemplated under the Tahoe City Vision Plan.

Cumulative Effects Along SR 267 and in the Martis Valley

The Martis Valley Trail, the Joerger Ranch Specific Plan, and Pollard Station Senior Neighborhood are all in the vicinity of Segments 650-3, 650-4, and 650-4B. Pollard Station would be an age-restricted senior neighborhood consisting of a lodge and condominiums on 8-acres in the Hilltop Master Plan area; the Joerger Ranch Specific Plan would be a 70-acre mixed use planned community including industrial, office space, public facility, transportation, and apartment uses; and the Martis Valley Trail would be a paved, multi-use recreational trail extending from the southern limits of the Town of Truckee at the Nevada/Placer County line eastward to the ridgeline defining the Lake Tahoe Basin. A 5.4-mile section of the trail would run along SR 267 between Truckee and Northstar.

The impacts of the project on scenic resources are less than significant and limited to travel routes in the Martis Valley, including SR 267. In general, the project would result in minor visual changes within Martis Valley, either because it replaces existing poles, or because of the distance of the power line from potential observers. Both Pollard Station and Joerger Ranch would result in visual changes within the Martis Valley that would be conspicuous for travelers on nearby local roadways, but the development would occur in the rural transition zone where housing and golf courses are already present and part of the existing visual character. The visual changes resulting from the development projects would not occur in the same view direction as the power line in the valley. Therefore the cumulative effect would not be significant. The Martis Valley Trail would bring additional viewers to the Martis Valley area, which would remain largely unobstructed and would continue to provide unique, high quality views of the surrounding environment. The trail itself would be a minor incremental addition to the visual effect of SR 267. Therefore the cumulative effect of the trail and the project would likewise not be significant.

Cumulative Effects Summary

There could be a cumulatively significant impact along SR 89 in Tahoe City due to the planned SR 89 Fanny Bridge Project, but the project contribution to the cumulative impact would not be cumulatively considerable because the only visible elements within views of the new bridge would be the power line conductors. Within Martis Valley and along SR 267, the cumulative impact would be less than significant because the magnitude of visual effects/changes would not be sufficient to exceed significance thresholds.